

ITEMS OF INTEREST.

VOL. VII. PHILADELPHIA, SEPTEMBER, 1885. No. 9.

Notes from the Profession.

SEVENTEENTH SESSION OF THE PENNSYLVANIA STATE DENTAL SOCIETY.

(Held at Cresson, Pa., July 28th, 29th, and 30th, 1885.)

REPORTED FOR THE ITEMS BY DR. WM. H. TRUEMAN, PHILADELPHIA, PA.

President, Dr. George Elliott, of Meadville, called the meeting to order at eleven o'clock; forty members and delegates present.

The only subject of general interest during the morning session was a communication received from a committee consisting of Drs. T. W. Brophy, C. R. E. Koch, and J. N. Crouse, appointed by the Chicago Dental Society at a meeting held December, 1884, to take action in reference to the meeting of the Medical Congress at Washington in 1887. The communication requested all who were in favor of organizing a section of Oral and Dental Surgery in the International Medical Congress, to use their influence to have it so organized, that all practitioners of dentistry, recognized by dental societies, may be eligible to membership or admission to the Congress.

The communication was referred to a committee consisting of Drs. Louis Jack, C. N. Peirce, and E. T. Darby.

At the opening of the afternoon session, the above committee made the following report, which was unanimously adopted:

Your committee, to whom was referred the communication of Drs. Brophy, Koch, and Crouse, of the Chicago Dental Society, would recommend this Society to send to the American Dental Association at the meeting of this year the following:

This Society recognizes with satisfaction that the International Medical Congress has in its organization included a section of Oral and Dental Surgery.

Resolved, That it is the sentiment of this society, that the organization and personnel of the Section of Oral and Dental Surgery should be instituted by the American Dental Association, which we believe in its corporative capacity is the only body fitted to satisfactorily establish this section.

We also recommend the society to communicate with the officers of the International Medical Congress the propriety of placing the appointment of the members of the Section of Oral and Dental Surgery, and the organization of this Section, in the power of the American Dental Association ; and that the society takes this action in the belief that the result of such action by a representative association composed of the leading persons in this country engaged in the study and practice of Oral and Dental Science will prove entirely satisfactory.

LOUIS JACK,
EDWIN T. DARBY,
C. N. PEIRCE.

An address of welcome was then read by Dr. W. B. Miller, of Altoona, and responded to on behalf of the Society by Dr. Gerhart, of Lewisburg. This was followed by the President's address ; all which, while quite appropriate, had no special professional bearing.

The meeting being open for professional topics, Dr. C. N. Peirce asked if it was possible for a patient to be so susceptible to the influence of mercury that an amalgam filling in the crown of a vital molar would cause perri-cemental inflammation.

He related the case of a lady who came to him complaining of discomfort in two adjoining molar teeth. The teeth were rather loose, quite sore, and gave every evidence of marked perri-cemental inflammation. On two occasions, while under medical treatment, the patient had suffered ptialism from minute doses of some mercurial preparation ; the effect being induced on each occasion accidentally, and much to the physician's surprise ; thus showing an unusual susceptibility to the drug. The fillings were removed, and gutta-percha substituted, with almost immediate relief. In a short time the soreness disappeared, and the teeth became quite firm. The patient then called attention to two molars on the other side of the mouth, also filled with amalgam. They were uncomfortable, but not so painful as those first treated. The teeth gave every evidence of vitality. The amalgam was removed and the teeth refilled with gutta-percha ; they then became quite comfortable and firm. There had been no treatment farther than substituting the gutta-percha for the amalgam. A patient similarly affected had been sent him by a dentist. He was treating an apparently vital tooth for perri-cemental inflammation without satisfactory results. This tooth contained a large amalgam filling. The amalgam was removed and gutta percha substituted, which caused entire relief. In each case cited, the fillings were confined to the crowns, were in excellent condition, and were not in contact with the soft tissues at any point ; the effect seemed to be purely local, the only evidence of trouble from mercury being the condition of the teeth, which were sore, loose, and elongated.

Dr. Darby stated that about twenty years ago, while visiting a dental office in the western part of New York, he was shown a number of teeth markedly exostosed, most of them containing amalgam fillings. They had been recently extracted from a lady's mouth. The patient had complained of severe neuralgic pain; after suffering for some time the teeth were extracted. Those containing the amalgam fillings were decidedly exostosed; the others looked normal, and if he rightly remembered, were sound. The dentist who extracted them thought the exostosis was in some way caused by amalgam. The incident was recently recalled by receiving from a dentist residing in the West a box containing many specimens of exostosed teeth. On examining these he was surprised to find a large proportion contained amalgam fillings. He was not prepared to say how the amalgam caused the exostosis, nor yet even to say that it did cause it. The remarks of Dr. Peirce reminded him of this circumstance.

The discussion became general on the demerits and merits of amalgam; the question of Dr. Peirce being lost sight of.

Dr. G. L. Robb, of Huntingdon, said that some time ago he was annoyed by many teeth he filled with amalgam coming back to him, the patients complaining of severe pain, generally of a darting character as though the pulp was pressed on. He at last thought it might be caused by the expansion of the amalgam. He changed his amalgam, and since then has had no trouble.

Dr. C. S. Beck gave an instance much like that related by Dr. Peirce. The patient was a lady of an excitable, nervous disposition. Some time after an amalgam filling had been inserted, the tooth became troublesome. He removed the amalgam and substituted gutta-percha; since then the tooth has been comfortable. He could assign no reason for the trouble.

Dr. William H. Trueman had listened with interest to the remarks of Drs. Peirce and Darby. He could not conceive that so little mercury as would escape from an amalgam filling could cause the severe local trouble spoken of without its presence being made known in other ways; yet we must bear in mind there are individuals remarkably susceptible not only to some particular drug, but also to some one marked therapeutic property of that drug. If the teeth spoken of should, after a time, be again filled with amalgam, and the symptoms previously observed recur, that would be very strong evidence that the mercury was the cause. He had met with a number of cases where pain followed the filling of a large cavity with amalgam, and which were relieved by removing the filling and substituting gutta-percha or one of the cements, and these same teeth after a time were again filled with amalgam and

remained comfortable. The pain complained of was more a soreness than that which usually arises from thermal changes. Evidently the amalgam was not the real cause of the trouble.

In regard to the teeth spoken of by Dr. Darby, we must not forget the original lesion, the cavity of decay, which preceded the amalgam filling, and which of itself would be sufficient cause of the condition noted. We all know how slight a cause will occasionally produce exostosis, and how frequently deviation from the normal condition is found where there is no apparent cause, and where otherwise the teeth and their surroundings appear healthy. If we should meet with a mouth containing some teeth filled with gold or gutta-percha, and some with amalgam, and on extraction find those filled with amalgam exostosed while the others were not, we might safely consider that amalgam had something to do with it, provided all the teeth when filled were in a similar condition. While it will not do to entirely ignore these mysterious cases, it is equally unwise to give them undue importance. They are entitled to careful consideration. He was reminded of discussions on the same subject which took place forty or fifty years ago. Men who stood quite as well with the profession then as we do now, related cases where they had inserted amalgam fillings in teeth that had been dead for years, without any previous treatment, and when the inevitable alveolar abscess made its appearance it was believed to be caused by the poisonous effect of the amalgam. These cases were constantly cited as reasons why amalgam should never be used in the mouth. Those who spoke then undoubtedly gave utterance to their honest convictions. In the light of the present we are amused at their blunders. This should teach us caution.

The evening session was opened by reading a paper entitled "Teachings of Experience," by Theodore F. Chupein, D. D. S., of Philadelphia.

The doctor after noting the various methods and theories advocated from time to time, gave the conclusions he had reached as the result of thirty-three years active practice; and the reasons which had led him to approve and adopt the methods which he advocated.

He said, at one time every effort was made to preserve the first molars, but gradually the profession has been forced to recognize the fact that the saving of these teeth was not always for the best. With many the advantage afforded the other teeth by their removal was far greater than any evil likely to result from their loss.

When the first molars show signs of decay early in life, or where the teeth are large and the jaws small, their extraction at the proper age gives the remainder of the teeth more room for development; specially favoring the bicuspid and third molar. Not only is the

third molar endangered when presenting in a crowded jaw, but the distal approximal surface of the second molar is frequently injured by the close contact. This is a position exceedingly difficult to properly fill.

He did not give any specific age for the extraction of these teeth; nor yet advise it as a rule without exception. The time of eruption is not always the same; there are certain individual peculiarities and textures of teeth, and other considerations that influence our judgment.

When he decides on the loss of the first molars, he endeavors to preserve them by means of temporary fillings till the second molars are ready to erupt. By extracting them at this time, the tilting of the second molars will be prevented as they will naturally fall *nearly* into the space formerly occupied by the first molars. The bicuspid usually separate slightly. This relieves the approximal surfaces of close contact, and thus prevents decay.

Should the character of the first molars be good and the jaws large, and should there exist indications that the texture of the teeth will improve as the child advances in age, he would prefer to retain them and risk losing the third molar by extraction, as soon as it was sufficiently erupted, if the condition of the denture required it. He considered it far better to retain only twenty-eight teeth than to endeavor to save the full compliment and risk all. He also referred to the many cases of facial neuralgia—so hard to diagnose by many—but often caused by the third molar being unable to erupt on account of the crowded condition of the jaw.

He had settled down to the conviction that gutta-percha was the best material with which to fill nearly all approximal cavities in nearly all classes of teeth up to the twentieth or twenty-fifth year. Gold may be admissible on the masticating surfaces; but tin or amalgam could be placed there with equal if not better effect up to these ages. Gutta-percha may require repeated renewals, but this is so easily done he thought it better to submit to that than to a large, wearisome and expensive operation with gold, which would fail almost invariably in a few years through recurrence of decay. The fillings could be renewed—teeth irreparably decayed could not.

He spoke of the practice of filling cavities at the cervical margins with gutta-percha, and completing the operation with gold, amalgam or one of the cements; and disapproved of it. Those which he had seen had not impressed him favorably. There was a look about them as if the harder material had pressed on the gutta-percha and caused it to bulge or protrude. It may be admissible to use it in some cases on the floor of the cavity to prevent thermal shock, but where possible he preferred one of the cements, such as the oxy-chloride or

the phosphate of zinc, or one of the non-irritant class. When it is used at the cervical margin, he recommends that it be beveled off to an extremely thin edge, so that the harder material used will completely cover it. In no case should the permanency of the filling depend on the gutta-percha. The permanent filling should be securely anchored independently of it.

He regarded with but little favor, contour fillings in the bicuspid and molars made entirely with cohesive gold. When such fillings are on teeth narrow at the neck, or "fan shaped," they may be successful; in other cases decay will recur in spite of the most careful finishing, and the best knuckling of gold against gold. He advocated filling the cervical portion with non-cohesive gold, or amalgam, or tin; and finishing with cohesive gold. There seems to be a therapeutic attribute in tin and in amalgam not possessed by cohesive gold.

He severely condemned removing good, old-fashioned, non-cohesive gold fillings to insert in their place, nice, smooth, brightly-polished cohesive gold fillings. He had known this to be done when the old fillings were faithfully preserving the teeth. He regarded such practice as dictated by a spirit of egotism—looking with contempt on the efforts of the past—rather than a spirit of honesty and justice.

He regards the zinc oxy-chloride, and the zinc phosphate as serviceable in lessening the time required to insert large fillings of gold; he prefers to have the larger part of the cavity filled with cement, the gold being afterward anchored in and built over it. They are specially useful in devitalized teeth.

He has been very successful in pulp capping in cases of recent exposure, but equally unsuccessful where there was evidence that the exposure had existed for some time. Where the pulp bled profusely he was invariably successful. Where he found the pulp exposed after removing decay, and there was little or no pain during excavating, he usually applied the arsenical paste to complete devitalization. Where there was the smallest hope of success, he recommended and practiced pulp capping.

He feared that in the operation of root filling, he would be deemed an "old fogey," for, despite a trial of all, or nearly all, the methods and materials recommended, he still adhered to the use of cotton. He preferred to use it in small pieces about the size of the head of a large pin; used in this way it was less liable to "Jam."

For regulating teeth he had found the various forms of the "Coffin" spring plate valuable; and in all cases where they could be applied he had used them exclusively.

The discussion which followed the reading of the paper was mainly on the use of the "Coffin" plate in regulating.

Dr. Guilford, stated, speaking of the "Coffin" plate, that, where

the teeth lean so that the point of the spring has a tendency to slip off, he fitted around the tooth a thin platina band, cementing it in place with phosphate of zinc when he preferred not to carry the plate over the molars, he makes the points which pass between the teeth quite long, so that they will pass well into the inter-space. As the jaw expands, the plate has a tendency to loosen; this he corrects by warming the points and bending them down. In lower plates designed to expand the arch, he does not think it needful to cover the molars and bicuspid; there is no tendency in the plate to jump out of place as with an upper plate. This is prevented by the shape of the lingual surfaces of the lower molars; it is only necessary to let the plate pass over the crowns of the back teeth, at one or two points, so as to prevent the plate pressing into the gum.

Dr. Essig, makes use of the elasticity of vulcanized rubber to press out the anterior teeth. He makes a vulcanite plate with a stud back of the tooth to be moved; through this he passes a screw, with the point pressing against the tooth. The object of the screw is not to move the tooth by the pressure it exerts, it simply follows it up. As the screw is tightened, the rubber stud is slightly bent back, and the elasticity of the stud moves the tooth. A little care is needed in constructing the plate not to vulcanize it very hard, and not to make the stud so thick as to be rigid.

Dr. Darby suggested, that care was needed in using the split plate for young patient's; much force might separate the palatal bones. He related a case where this occurred, but fortunately it was noticed in time to prevent serious injury. The suture had opened from just inside the centrals to the soft palate.

Those who took part in the discussion had found the "Coffin" plate very satisfactory. Some had difficulty in using the split form on account of the halves twisting when it was pulled apart; when this has taken place the fit of the plate is impaired. It was suggested, that it was not necessary to make a new plate when the springs need changing, the old could be cut out and new springs vulcanized in the old plate.

Dr. Peirce suggested a simple method he had used with satisfactory results to bring out the upper centrals or laterals in young patients, when he was fortunate enough to see the irregularity just as the teeth had erupted sufficiently to slightly overlap, where the upper front teeth articulated inside the lower teeth. He tied one end of a silk or gilling twine ligature to the lower central or lateral, or included several of the teeth in a loop, and tied the other end to one of the molars of the same side; this was done on both sides of the mouth, the two ligatures forming a triangle. He then passed a thread over both of them, and by forming a knot drew them together a little dis-

tance back of the front teeth ; this tightened the ligatures and drew the teeth in so far that, in the course of from twenty-four to forty-eight hours, the lower teeth will be found articulating inside the upper. The ligature may then be removed ; the lower teeth acting on the upper gradually forces them into position. He had used this method many times, and found it the most rapid and satisfactory he had tried.

The examining board reported that three candidates had appeared before them ; and, having passed a satisfactory examination, were granted certificates of qualification.

HEMORRHAGE OF THE GUMS.

Frank K., editor, aged 52 years, in good health, presented himself, accompanied by his family physician, for relief from hemorrhage of the gums on the evening of July 25th, 1885.

On examination I found all the teeth in place and in remarkable good condition for his age, the gums and floor of the mouth inflamed, blood flowing freely from the space between the first lower molar and second bicuspid ; right side, with no evidence of violence to the teeth or gums.

The patient said he suffered a great deal from the intense summer heat. For several days previous, and for fifteen years has used table salt on the brush in cleansing his teeth. First noticed the presence of blood in the saliva in the morning of the day mentioned, that it increased in quantity during the day till he applied to me for relief. He had lost a great deal of blood but had experienced no pain.

The hemorrhage was exceedingly difficult to arrest. After the first point was under control the blood forced itself out near the lower incisors and afterward between the molars on the opposite side, in a very short time.

Warm water and salt treatment followed by an application of Monsels sol. and cotton, and plaster of Paris packed between the teeth. I would like to have information as to the cause of the above trouble and whether similar cases have been noticed.

G. W. HASTERMAU, D.D.S.

Editor ITEMS:

For teeth that are slightly disintegrated and sensitive on the labial and buccal surfaces near the margin of the gums not sufficient to justify in attempting to fill, I use a bright burnisher. The sensitiveness will soon be relieved by burnishing. I use no powder of any kind before or after burnishing. Direct the use of soft brush, water and soap, (usually castile.) This has been my remedy for fifteen years with success.—S. S. JOHNSON.

CARBOLIZED POTASH.

DR. W. E. DRISCOLL, MANATEE, FLA.

We learn caution in recommending a new remedy or process, as a large proportion, which seems valuable to us, fail when tried by others. When Carbolized Potash, or the "Robinson Remedy," was first introduced I waited for others to express their opinions. The few who have done so speak favorably of their results. I first procured it for a case where the enamel was denuded from the six anterior upper teeth near and extending under the gum. The lady who wished these teeth filled had many fillings in other teeth. All had been very sensitive but she endured the pain with great fortitude; but in these labial cavities she could not endure the weight of an excavator without shedding tears. The dam being in position I applied the paste of carbolized potash to a cavity, and made repeated efforts to excavate; but it was at least five minutes from the time of application before the carbolized potash took sufficient effect for her to permit me to proceed with the preparation of the cavity. For the retaining points a renewal of the remedy was necessary. When the first filling was finished, the patient said, "Why it works like a charm, I will now have all filled as fast as it can be done." She also said, "The full effect from the first application lasted just seven minutes by my watch." The pressure of the dam to get above the decay was also painful but the remedy had the same effect as on the sensitive dentine except it acted quicker on the gum. While this is only one case among those I have had during the past four months, I consider it the severest test of the remedy. It has prevented pain in excavating every time I waited for it to take full effect.

I have used it with fine effect on exposed and aching pulps, when there was not time to do more than stop the aching.

In pyorrhea alveolaris my experience with it has not been as great as in cases above cited; still I feel justified in recommending a trial of it for this disease, judging from the few cases in which I have tried it.

[Dr. Robinson's method above referred to is to grind together equal parts, by weight, of carbolic acid and caustic potash. He applies this smooth paste in small quantities to the sensitive cavity or surface, and in a few minutes wipes it away. If any remain, the paste may be repeated. He also finds it good as an application to aching exposed pulps, preparatory to treatment. He thinks it seldom necessary to destroy exposed pulps.—ED. ITEMS.]

EDITOR ITEMS: Will you, or one of your subscribers, inform me of a satisfactory method of mending broken plaster casts—say a tooth broken off in separating from impression or any portion of the cast that may become detached?

G.

TROUBLE IN MAKING ARTIFICIAL TEETH FIT.

QUESTIONS ANSWERED.

DR. L. P. HASKELL, CHICAGO, ILL.

The letter of your New Brunswick correspondent which you have sent me, I will endeavor to answer through the ITEMS.

He says he wants "information on the many causes which produce trouble in making plates fit, or stay in well."

There are some mouths into which sets of teeth can almost be thrown, or in other words, little or no skill exercised in their construction, and yet be worn successfully, because *all of the conditions* are favorable. On the other hand, there are mouths in which all of the conditions are unfavorable, and all the experience and skill of the dentist must be exercised, and then it will require time and patience on the part of the patient to learn to use them successfully.

What are these conditions? I will take the extremes; and, first the *favorable*: A rather broad maxillary, not too deep, rather medium is preferable; a good alveolar process, nowhere flexible; somewhat soft palate, always expecting the center to be hard. The lower maxillary retaining most of its teeth, and the closure being under the upper maxillary, and not outside or protruding. In such a mouth a mere novice can succeed. The other extreme would be a short, narrow maxillary, the alveolar process all absorbed, having a flexible, yielding ridge; the palate with scarcely a yielding spot on its surface. The lower maxillary broad, closing outside of the upper perhaps a fourth, in some cases a half inch. You have here a very difficult case to handle, and unless the patient has sense enough to comprehend the difficulties of the situation, and exercise patience in learning to use them, there will surely be no end to complaint. She will still wonder why her teeth cannot be made to be used as readily as her neighbors. She does not comprehend the fact that she *has not her neighbor's mouth*.

One very important point is often overlooked, viz: the importance of *correct articulation*, or antagonism of the teeth. Many a nicely fitting plate, well constructed, is rendered useless from this cause. No amount of suction will long withstand undue pressure in front on one side. The six anterior should never come close together. Patients are often found wearing teeth where they do so close, but, it will always be found that the plate is displaced in consequence, but the patient has learned to *manage it*. This condition of things should always be remedied.

The position of the remaining lower teeth has much to do with the usefulness of an upper set. And right here I want to protest against the radical *conservatism* that insists on retaining every natural tooth under all circumstances. It is the source often of untold annoyance

to those wearing an artificial denture. A safe rule to follow in this matter, is simply this: The patient is compelled to wear only what is lacking, and *in order to make it as comfortable and useful as possible*, extract whatever teeth necessary to accomplish this end.

To illustrate—a full upper denture is necessary; on the lower jaw there remains the six anterior; on one side all the bicuspid and molars are gone; on the other, two bicuspid remain. What results? All the pressure being on that side, the plate is constantly displaced. What should be done? You may say, put in a partial lower. Very well, after a few weeks, or months at farthest, the artificial teeth have *yielded* to the pressure, and the pressure is still all on one side. Those two bicuspid, however sound, are *worse than useless*. Remove them, and bring the pressure on artificial teeth on both sides, and the patient is infinitely better off.

If the lower jaw is a protruding one, it is often necessary to arrange the upper anterior teeth inside of the lower, and set the bicuspid and molars well in, so as to bring the pressure as much as possible under the ridge.

Often, the last molars strike first—this should never be allowed—often, a lower “wisdom” tooth stands at an angle of forty-five degrees. If it meets an upper tooth its only effect is to crowd the plate forward; do not allow it to meet at all, if this cannot be prevented.

The manner in which the cusps of the bicuspid meet is of great importance. The *posterior incline* of the *lower*, should always press against the *anterior incline* of the upper; otherwise the plate is pressed forward.

As to the fitting of plates, I will give my practice for *twenty-five* years, with successful results, after having pursued other methods fifteen years.

I can always depend on a plaster impression. I find no use for “air chambers,” except in partial cases, and not always then; always raise the plate slightly over the hard palate, so that it shall not press there, and rock neither at present nor in the future. Be sure that the plate sets snug to the membrane at the rear for the width of one-quarter of an inch, so the air shall be excluded. This can be ascertained by wetting the plate and *pumping* it; at the same time it must not *press* at the central portion so as to irritate; this is the main thing to guard against.

Carry the plate as high as it can be worn, *especially over the canines*, and making that the most prominent with gum, in order to restore the contour of lip.

These are the chief points; of course new combinations are constantly appearing in the shape and conditions of the jaws, and the relative positions of the jaws and of the teeth.

PROF. J. C. WHARTON ON DISINFECTION.

(From Report of Tennessee Board of Health.)

J. D. Plunket, M. D., President State Board of Health, Nashville:

SIR—In the effort to devise a convenient method of generating and diffusing some disinfecting vapors, the merits of which are generally acknowledged by those who have studied the subject, I have chosen as among the most efficient and useful the three elements—chlorine, bromine, and iodine, together with sulphur dioxide, more commonly known as sulphurous acid gas—and have so arranged that a soluble combination may be effected which will secure a most easily conducted method of setting free one, two, or more of the vapors in their most active state by simply burning in an ordinary lamp. The solution may be mixed with the oil commonly used in the house for lighting purposes, or a separate lamp and oil may be used, a small night lamp answering very well. A suitable proportion of the disinfecting solution is to be mixed with the oil for burning, and this, when it is lighted, will disengage the vapors; and the degree of strength may be easily varied by regulating the flame of the lamp or by varying the proportion of the disinfecting solution. Samples of the solutions and lamps, in the act of burning, are furnished for your inspection; and the components of the solutions and manner of preparing them will be explained, if such is desired, so that the members of the Board may have a thorough understanding of the whole matter, and may judge intelligently as to the merits, adaptability, etc., of the method.

The chief aim in this communication is not to discuss the extensive subject of disinfectants in general, but simply to set forth the facts that these disinfecting gases or vapors may be readily generated, either singly or simultaneously, as the physicians may direct; and the process may be begun, continued, or stopped by the mere act of lighting, burning, or putting out a lamp of ordinary construction. Hence it would seem to supplement other methods where they would in some cases be entirely unavailable, while the gentler evolution of the vapors and milder action of them would render this proposed method much more agreeable in its operation than others have been which attained their ends by the use of similar vapors. Not an insignificant feature of this plan is the general distribution of the vapors as they are liberated from the lamp and caused to circulate by the currents of heated air set in motion by the flame.

For Fumigation.—Dr. G. R. Thornton, of the Louisiana quarantine says: The fumes of sulphur, bi-chloride of mercury, and an abundance of water all applied by powerful machinery, and pure, fresh air, are the germicides to be relied on. These agencies are applied in such quantities and length of time as is thought sufficient to answer the ends sought.

COCAINE.

WALTER W. ALLPORT, M. D., D.D.S., OF CHICAGO, ILL.

The introduction of cocaine as a local anæsthetic, and the more general use of peroxide of hydrogen ($H^2 O^2$) in the treatment of dental and oral diseases, are the principal advances made in the medical department of this practice during the year for which this report is made.

The two forms of cocaine which have been most generally used in surgery are the hydrochlorate and the oleate. In operations in the mouth, involving the mucous membranes, together with the immediately subjacent tissues, these preparations have proven so efficient there is little question of its value as a local anæsthetic in such cases. But its action on deeper structures, such as involve the roots of teeth, is so uncertain as to render its practicable benefits questionable in the operation of extraction. In the surgical treatment of pockets caused by pyorrhea alveolaris, the anæsthetic effect of this agent is often so great as to render this sometimes very painful operation comparatively painless, and its employment in such cases should rarely be dispensed with. In the treatment of hypersensitive dentine, as well as in the removal of tooth-pulps, its action as an anæsthetic has, under some circumstances, seemed to be all that could be desired. But in far the greater number of cases it has proved of little practical value. More recently, however, a new form of cocaine, known as the citrate, has been introduced in Germany by Merck, and is now being manufactured by McKesson & Robbins, of New York. In a series of experiments, conducted by Dr. John S. Marshall, of Chicago, it has been shown that for operations on sub-mucous tissues, or in the extraction of teeth, it seems to possess no special advantages over the preparations previously named. But when applied to dentine or the pulp, its action—though not always positive—seems to be more reliable, especially on the dentine, and gives promise of better results. Under favorable conditions it produces anæsthesia of the parts in from five to ten minutes, and the duration of the effect is of sufficient length to afford time for the preparation of the cavity. This effect has, in some cases been prolonged for more than an hour. The pulp has been extirpated without pain after the drug has been applied in from three to twelve minutes.

If the citrate of cocaine be kept in solution for more than three or four days it decomposes and loses its active properties. As introduced by Mr. Merck for dental purposes, it is made into pills by incorporating it with gum tragacanth dissolved in glycerine, each pill containing $\frac{1}{8}$ grain of the citrate. In this form it keeps well. A pill is applied to the sensitive cavity and covered with a cotton pledget, moistened in tepid water. It should be allowed to remain from five to twelve minutes, when—if at all—the desired result is produced. In twenty per

cent. of the cases where this remedy has been employed it has proven unsuccessful, but it is hoped that this percentage will be reduced by a better knowledge of the drug and the improved methods of its preparation and use.

With this end in view, and at the suggestion of Dr. Marshall, McKesson & Robbins are now manufacturing granules containing one-sixteenth of a grain of the citrate of cocaine, without glycerine or any other saccharine excipient, so that the obtundent may act more promptly than it can in the presence of sugar.—*Address at American Medical Association.*

SAVING ROOTS.

Dr. J. Taft, says: I can remember, and it is not very far back, that if there was a pulpless or an inflamed root in a mouth, the best method was thought to be to take it away, for fear it might do mischief at some future time; and often teeth were removed with the pulps alive. I have known many cases where good teeth were removed to make way for artificial dentures. Such would not be the treatment now. All teeth and roots that can be made useful, in any way, should be retained. They preserve the form of the features, and do good service. In a quarter of a century the practice has so changed that the removal of what was formerly regarded as a nuisance would now be severely censured. The subject is receiving as much attention as any now before the profession. The practice of some is commendable in this respect. They act like the skilful surgeon who endeavors to save any part that can be restored to usefulness. I believe the time will come when roots, such as are now destroyed by some of the most skilful, will be saved. If roots are allowed to remain they must, of course, be restored to health.

There are many methods of crowning these roots, though none of them are good for all cases. Only by wide study and conscientious efforts will you succeed. If you fail do not give up, but try again. We cannot expect to succeed at once with a new method, though it may have great merit. Sometimes a root will be rebellious, and we fail, but that should not discourage us. Physicians lose cases, so shall we be unsuccessful; we should go on in the expectation of success, and be exceedingly careful how we sacrifice teeth or roots that might be saved. If a pulp dies it must be without any assistance from me. A physician might as well decide to kill his patient because he thought he might not get well. Never use so deleterious an agent as arsenious acid.

Bichloride of mercury.—Dr. Abbott says, is the simplest antiseptic we have. In twenty-one ounces of water use a half grain— $\frac{1}{2}$ to 20,000.

DEAD TEETH IN THE JAWS.

TRUMAN W. BROPHY, M. D., D. D. S.,

(Professor of Dental Pathology and Surgery in the Rush Medical College, Chicago.)

In reply to Dr. Sexton on this subject, Dr. Brophy makes these pertinent remarks in the journal of the American Medical Association:

Dr. Sexton says: "The retention in the jaws of teeth which are diseased, have become irredeemably sensitive to thermal influences, or deprived of adequate periosteal nourishment through calcareous formations about the roots, very frequently gives rise to nervous diseases about the head. I am convinced that these reflected nerve influences manifest themselves much oftener since dentistry has come more extensively into practice during the present generation, and greater efforts are made to retain defective teeth in the jaws."

That diseases of the teeth are often the center from which pain is reflected to the eyes, ears and other parts, all experienced clinical observers must admit. But that these pathological conditions of the teeth, from which reflected pain has its origin, can be and are successfully treated and cured with rare exceptions, as effectually as any other diseases, is a fact too well established to be set aside.

It is not possible to describe in this letter the method by which the various diseases of the teeth are treated, but suffice it to say that "teeth which are diseased from death of the pulp or from caries" *do not* "become irredeemably sensitive to thermal influences." In proof of this statement, many thoroughly educated medical men, practicing the specialty of dental surgery, will testify.

"Teeth deprived of adequate periosteal nourishment, through calcareous formations about the roots, very frequently give rise to nervous diseases about the head." To this statement I assent, but dissent as to the remedy not mentioned but implied, *i. e.*, the removal of the teeth. If the calcareous deposits mentioned have destroyed so much of the pericementum and the alveolar processes as to render the teeth very loose; if, indeed, the teeth have lost their bony support and are retained by means of a remnant of pericementum only, they cannot, of course, be restored to permanent health and usefulness, and their removal is, therefore, indicated. Teeth in this condition "frequently give rise to nervous diseases about the head."

On the contrary, if the calcareous deposits have not destroyed the pericementum and alveolar processes to a very great extent, the condition is amenable to intelligent treatment and cure. In answer to the assertion that "Reflected nerve influences manifest themselves much oftener since dentistry has come more extensively into practice during the present generation," I would say, that with equal propriety it might be said that reflected nerve influences manifest themselves more frequently since gynecology has come more extensively into

practice. To attribute the obvious increase of nervous diseases during the present generation to diseases of the teeth is a statement not only "sweeping," but "overdrawn." *Much harm* is no doubt done by some of the modern appliances "for retention in the mouth of substitutes for absent teeth," and the unhealthy state of the gums and contiguous parts, established and maintained by the presence of these substitutes, unquestionably give rise in many cases to reflected pain.

When Dr. Sexton attempts to establish a *law* governing the management of diseased teeth, it must be based on more substantial grounds than those which he presents. The case related of his patient, the "medical man, who practices dentistry," and who was convinced that an inflammation of one of his ears began from the time the upper second molar of that side was treated for a diseased pulp, is simply an assumption, on the part of the patient, that the ear trouble had its origin from the diseased tooth, and the patient's diagnosis of his own case seems to have been accepted by Dr. S. as conclusive. The ear disease in this case may have emanated from the diseased tooth, but no evidence is produced to that effect. In regard to the query as to "whether it is safe practice to retain dead teeth in the jaws," I would say that thousands of people in our own country have had pulpless (not dead) teeth in their jaws many years, which are exempt from pericemental disease, and which serve all the purposes for which teeth were provided. To ask whether it is safe practice to retain these, so-called, dead teeth in the jaws when they have been comfortable and useful from ten to forty years and promise to remain so through life, seems like a proposition too injudicious to need comment. While the death of the pulp results in "cutting off the source of nutrition from the dentine," it does not follow "that in a large number of instances irritation can not be easily controlled."

Neither does the tooth become a foreign substance. The dentine and the enamel are, of course, no longer nourished after the death of the pulp, but their resisting structure renders them capable of maintaining their integrity many years after the pulp has been removed; and the pericementum will nourish the cementum and thereby retain the tooth in its alveolus in a comfortable condition. In order, however, to thus retain the tooth and prevent inflammation from supervening, the devitalized pulp must be removed, the pulp canals thoroughly disinfected and filled with a plastic material which hardens when in position. Dr. S. most clearly exhibits his imperfect knowledge of the dental operations in vogue when he says: "Inflammation of exposed dentine cannot surely be entirely arrested in any case by filling the pulp cavity with any known extraneous material, and especially is handicraft wanting to even imperfectly protect the minute and often tortuous canals leading down to the apical foramina of the majority

of the teeth." To arrest "inflammation of exposed dentine by filling the pulp cavity," in the opinion of Dr. S. would seem to be most desirable. How a tissue without nourishment and consequently without vitality can take on or maintain inflammation is beyond comprehension. The impervious filling which I have mentioned will close the apical foramina, together with the canal, which "in the majority of cases" *is not* tortuous to a degree of rendering the perfect filling of the root difficult or uncertain, and the assertion that the dental surgeon "is able only to offer a hopeful but uncertain prognosis in these cases" is contrary to well established fact. There are no diseases to which mankind is heir more scientifically and effectually cured than the diseases of the teeth in question.

Again: "The dead tissues of the dentine will sooner or later, most likely, be transmitted through the tissues of the cementum to the pericosteum." Communication between the lacunæ and canaliculi of the cementum with the tubuli of the dentine is not free; indeed, it seldom exists, hence it cannot be "that through the pericosteum alone the dentine may long derive some nourishment."

About 22,000,000 teeth are annually extracted in the United States, and I regret to say this enormous loss of teeth is to no small extent due to the indifference manifested by physicians in the anatomy, physiology and pathology of these organs. It is a fact, no one will attempt to gainsay, that hygienic measures directed toward the preservation of the deciduous set, if understood, are seldom recommended by the general practitioner to the families under his charge. The premature loss of these teeth paves the way for early lesions of the permanent set. The pain resulting from advanced caries of the deciduous teeth, owing to the difficulties encountered in controlling the patient, is not easily treated; moreover, the injurious impressions thus made on the system of the child abide through life. There is no doubt hundreds of thousands of teeth are unnecessarily extracted each year, and then drugs are given with a view of curing the patient of the disorders of digestion and other abnormal conditions which follow, and which in turn arise from imperfect mastication of food, verily for the want of teeth.

We need to know "what's the matter" in the treatment of these "nervous diseases about the head," as in all others, and apply a remedy which will bring the abnormal tissues back to health. Too often, indeed, has it happened that patients, by advice of their medical attendants, have submitted to the loss of many, and, in some instances, to all their teeth, in the vain endeavor to be relieved from trigeminal neuralgia. You may ask, Why this useless loss of teeth, and all the resulting evils? Because the advice given was not wise; the etiology of the affection was not understood.

There are certain pathological conditions of the teeth which have not been mentioned in this discussion, and which give rise to reflected pain of the eyes, ears, and other parts.

Among these may be mentioned exostosis of the roots of teeth and nodules of calcific matter within the pulp canals in contact with a living pulp. The former of these conditions has been regarded incurable, the removal of the tooth with the united bony tumor being indicated. In favorable cases, however, this tumor may be excised and removed without removing the tooth. The pulp nodules or calcified deposits within the pulp chamber may be, in a large majority of cases, successfully removed without sacrificing the tooth.

No one approves more than I the removal of the causes of disease. It is no more necessary to extract a tooth at the root of which an alveolar abscess has formed than it would be to amputate a limb for the cure of an abscess of the medullary substance of its bone. Disease of the eye sometimes requires that it be enucleated, but the honest, skilled ophthalmologist *would not* remove the eye when he *knew* he could restore it to usefulness. The spirit of the teachings of Dr. Sexton's articles is far from being progressive. Nor is this all; many assertions are not based on fact, but on erroneous impressions. Our duty to our profession and the laity is not to destroy but to save; and while ignorance is ever working its mischief in all vocations in life, it is not just to accept the results of such work as a basis on which to found a law.

Mental pneumonia.—Dr. Spalding says: It is difficult to discuss this subject without stepping outside the limits of the physical and into the domain of the mental. The most eminent minds in the scientific world have long endeavored to account for mental phenomena on mere physical grounds. In my opinion this attempt has always been a failure, and I avail myself of the opportunity to antagonize this view. There are no chemical or physical processes taking place in the brain that can possibly originate a thought or any other mental process. There is no molecular change, however subtle, that can produce a mental result. Thoughts, and all mental activities, come to us from the mental world—the world of spirits; and not from the world of nature. The fact is, the spiritual world is, at all times, just as near to our spirits, as the physical world is to our bodies.

Butter Making by Electricity.—*The Problems of Nature*, of New York, is drawing attention to the possibility of making butter from cream or milk by electricity. It claims that by this process, a larger amount can be made than by churning.

FRACTURE OF JAW AND TREATMENT.

Dr. Frank Abbott, New York, says: A lady patient, who was in the country during the summer, had the misfortune to be thrown from a carriage, striking on the right side of the lower jaw, in the region of the canine tooth. The jaw was thrown to the left, and, to all appearances, had a fracture near the angle on the left side. There was a fracture between the canine and lateral incisor on the right side. She was taken to a friend's house, and a surgeon—quite an eminent gentleman in Philadelphia—was telegraphed to come and attend her. He came, and did, I presume, what a good many surgeons would have done, viz., bound her head up with bandages as tightly as he could, tied her lower jaw in its place as nearly as he could, and left matters to take care of themselves. At the end of five weeks he took the bandage off and told her she was as well as she ever would be. She stayed at her friend's house some two weeks longer, then came home, and immediately came to my office and made an appointment. This was about the first of September. I saw her at the time appointed, and on examination discovered that the fracture on the right side had not healed. The pieces were loose. If there had been a fracture on the left side near the angle, as I concluded there had been,—for I could account for the one-sided appearance of the lower part of the face in no other way,—it had healed apparently as firmly as it ever was. On account of the moving of the parts she was unable to masticate, and consequently was unable to take anything in the way of solid food. After carefully looking the case over, and consulting with a surgeon in this city in reference to her physical condition, it was decided that the best plan to follow was to return the parts to as nearly their normal position as possible, by the easiest and most careful means possible, and retain them in position till they had united.

That was the treatment adopted. The operation consisted in taking an impression of the lower jaw, as perfect as we could get it, making a cast and set of dies, and striking-up a gold plate. This was used instead of rubber for two reasons: First, because it is a conductor of heat and cold. Second, it could be placed in position more easily. Across the anterior part of the mouth a jack-screw was fitted, and a cut made in the plate, so that a portion of it might be moved independently of the rest. With this the parts were readily placed in position. The question now was, how to hold them there and prevent the right side from tipping out too far. Fortunately a molar was missing on one side and a bicuspid on the other. Through these openings I passed a piece of wire, the ends of which were soldered to the plate. This was bent in the form of a hook. The apparatus was now ready and was placed in the mouth. By turning the jack-screw a very little each day for four or five days the parts

were adjusted. The ends of the wire were then fastened around the outside of the teeth by means of a piece of small platinum wire, and thus the parts were retained immovably for five weeks. When the apparatus was removed, to the great delight of the patient, it was found, that a firm union of the fractured ends had taken place. By grinding off prominent points of the molars and bicuspid and forming inclined planes, the jaw was gradually worked around to the right, so that something approaching the original 'bite' was obtained.

During the time the patient was wearing the apparatus she very faithfully rinsed her mouth six to ten times a day with antacids and anti-fermentative washes; consequently the teeth suffered very little." —[Proceedings of Odon. Society of New York, in *Cosmos*.]

Plaster.—I am much interested in the treatment of plaster casts with an idea to their more permanent keeping. I have tried the treatment recommended on page 177, April number of the *ITEMS*, 1884, and have found it a failure, I ask you if that article is correct in its directions or have I committed an error in my treatment.

Respectfully,

J. HOWARD REED, New York City.

[We know nothing personally of the process referred to. On page 376, August *ITEMS*, 1885, something valuable will be found; and the following from the *Scientific American* is worth attention.]

J. G. writes: I have a base ball made of (New York) plaster of Paris, 16 inches in diameter, containing the names of the clubs in the National League, in three-sixteenths inch raised letters. The surface dirties very quickly. I would like a receipt or coating that would keep off the dust and give it a marbled appearance. Answer—by a thin cover of water-glass or silax, a coating is formed. Another method consists in first thoroughly drying the article in a warm, dry atmosphere; then place it in a vessel and cover it with the clearest linseed oil, just warm. After twelve hours, take it out, drain, and let it dry in a place free from dust. When dry it will look like wax, and can be washed without injury.—*Scientific American*.

[The silax is apt to disintegrate and appear as a powder. Boiling plaster of Paris in a solution of borax is good.—ED.]

- Filling pulpless roots*.—Dr. C. F. Ives says: "In my hands nothing has been so uniformly successful as a slow-setting oxy-chloride of zinc, mixed to a moderate stiffness, and carried to position on a fiber or two of cotton."

[We find many dentists who use this, or oxy-phosphate, in this way, though we think more use their oxy-phosphate quite thin.—ED. *ITEMS*.]

THE SETTING OF PORCELAIN AND OTHER CROWNS.

S. B. LUCKIE, D.D.S., PHILADELPHIA.

Placing an artificial crown on a root is the last operation the dental practitioner can perform to retain the service and appearance of the natural tooth. He should therefore use every precaution to avoid any accident that might interfere with a possible necessity for a repetition of the operation. To meet the many requirements it is necessary to be eclectic in the selection of a crown, and to endeavor to restore to usefulness and beauty the organ in the simplest manner, yet give to the operation when completed the greatest strength.

The Bonwill crowns are sufficient to meet the requirements in a large majority of cases, and their construction and method of attachment have been frequently explained by Dr. Bonwill. There are some additional points, however, which I think may well be considered. After the root is prepared, to prevent splitting it, a small groove should be cut around the canal, between it and the cementum, which, when the pin is adjusted, the root filled, and the crown pressed to place, will solidly fill with amalgam and support the root on all sides.

If it is a root in the anterior of the mouth, the exhibition of a discolored joint may be prevented by placing a small quantity of light-colored gutta-percha, softened by heat, around the edge of the concavity of the crown, and at once adjusting the crown. A tight joint will thus be made, which will prevent the showing of the amalgam. Any excess of gutta-percha which may have been forced out should be trimmed off flush with the root and crown.

If a case presents where decay has progressed to such an extent as to leave only a funnel-shaped cavity, and but little substance for retaining the pin near the apex, a thin platinum band should be placed around the root, with a strip from it to be turned and burnished into the cavity, to prevent the band from slipping beyond the edge of the gum. Then close the foramen, select a small probe—a Gates' canal-drill, with bur broken off, answers well—and insert it in the root and pack amalgam around it; using either the Bonwill or the electric mallet to work the mercury well to the surface, removing the mercury with a piece of bibulous paper, and so manipulating the amalgam as to have it hard by the time the filling is completed. Then withdraw the probe; this leaves a canal that answers well as a guide in drilling. You have a root almost as good as if it had not been injured by decay, and the operation can be continued after the usual method.

When the root is perforated in one place or more, I use a piece of platinum foil, cut into a shape that may be adapted to the walls of the canal, as a lining. For success in the use of these crowns, it is important an amalgam of great strength be used; for, with inferior amalgam, the permanent building of badly disintegrated roots

is impossible. Low grades of amalgam are also subject to discoloration.

Experience has satisfied me that the attachment of these crowns or roots with amalgam, and a pin whose surface will amalgamate, is the strongest method that can be used; and so great is my faith in it, I take advantage of the mechanical principle in building contour fillings of amalgam in bicuspid and molars.

Cases will, however, present themselves when the articulation will not allow a porcelain crown of sufficient strength to be used. The inferior incisors and superior laterals frequently have roots so small as to prohibit the adoption of this method. For the roots of such teeth I prefer a platinum and iridium pin for the canal. A good collar is made to fit around the root and beveled on the labial surface beyond the free margin of the gum. A gold plate soldered on the beveled surface of the collar makes a cap for the end of the root. Adjust the cap on the root, select a suitable plain plate tooth and back it with gold, fitting it on the cap and attaching it with rosin and wax. Remove the tooth and cap; invest and unite with solder. After polishing the piece, attach it to the root with oxyphosphate of zinc.

For the roots of bicuspid and molars, a very permanent crown can be adjusted by making a cylinder of gold to fit the root, and allowing a filling of amalgam to extend from within the root through the cylinder; using a composition pin to strengthen the attachment.

Gold crowns can be adjusted in the same manner as the porcelain crowns, and a beautiful operation can be made, the amalgam being entirely hidden from view. A crown of this description is made by taking a ribbon of coin gold, numbering twenty-eight American gauge, and forming it into a cylinder shaped at one end to fit closely the root. An articulating face is made by taking a piece of gold plate, wider than the diameter of the cylinder, and placing on it small, square pieces of gold, making pyramids according to the number of cusps required. The plate is held in the flame of a blowpipe, to solder the pieces together and to the plate, using an eighteen-carat solder. Now flow a solder of a lower carat on the opposite side of the plate, place the cylinder on it, and again hold it in the flame till the solder reflows. The excess of gold is cut off, the cusps filed to their proper shape, the crown polished and filled with a plastic.

After the plastic has become hard, concave the base, drill the number of holes needed through the crown to its articulating face, and countersink the holes. The crown is now ready to be attached to the root. If, when adjusting the crown, any difficulty is experienced on account of the pins not adapting themselves, the holes can be made larger with a bur. After the crown is adjusted, the amalgam on the articulating face can be cut away and gold filled in its place, making to appearance an all-gold crown.

If a root be even with the gum, the gold can be made to encircle it. This is done in a very accurate and quick manner, by placing a soft steel wire, No. 27, around the root, and twisting the ends together till tight; then, burnishing the wire into the irregularities of the surface of the root, removing it and placing it on a block of soft but tough wood, and striking it with a flat hammer. You now have the exact counterpart of that portion of the root you wish to place the gold around. Gold crowns made and adjusted in this manner require about two hours' time, and necessitate but one appointment with the patient.—[Trans. Odon. So. of Penn., in *Cosmos*.]

COLLECTIONS.

DR. J. R. MORGAN, KOKOMO, IND.

How many times has an operator completed a long, tedious operation, to meet as a reward for his service, the expression "I have no money to day, I'll hand it to you," and off goes the patient, frequently without waiting to know even the amount of his bill. I am glad to have seen in the ITEMS articles on this subject.

Frequently a perfect stranger has dental work done without an intimation that he expects credit, till the operator has expended his time, labor, and material. How many of us have a dozen or more plates which have not been called for!

Lawyers secure a retainer before they accept a case, photographers require payment before beginning their work, and why not the dentist?

It might be done easily, and it certainly would be with profit, if all would agree to it, but it is hardly safe for one man to make the venture. Some one will be offended at being called on to pay in advance, and off he goes to a competitor, who soothes his wounded honor, and thereby gains a patron. If the patient met the same firm rule at every office, it would soon be understood as strictly business.

I suggest that in artificial work where the cash is not available when impressions are taken, a note be given worded something like this:

.....days after date I promise to call at the dental office of John Jones and receive one upper set of teeth, for which, if satisfactory, I will pay.....dollars. I further agree that, in case of failure to call for these teeth, I will pay the full amount mentioned above, with interest after maturity.

What is the Average Physician's Success? A great surgeon of London once in addressing a class of graduates, said: "So much of ignorance and heedlessness is there in the profession that I verily believe if all the physicians, and surgeons, and midwives, and druggists, and drugs were hurled from the face of the earth, there would be less sickness and less mortality among the people."

WHAT FILLINGS SHOULD WE USE?

DR. W. G. A. BONWILL, PHILADELPHIA.

When I look back at my commencement and reflect that my early practice was founded on what the older men in authority had published and taught, and how I feared to do other than they demanded, I shudder at the many teeth I extracted I now know might have been saved, with even the amalgam of that day. And I tremble at the advice *now* given by the authorities that *gold* only should be used as a permanent filling. Young men know no better, but the older do. God forgive them, I cannot. While I do not belong to the disciples of the new departure, *so far as their theory is concerned*, I stand side by side with any person *who can save teeth by plastic materials*, where gold cannot be used. Better do this than persist with gold indiscriminately, and lose teeth, rather than stoop to conquer with *any article* that is *not gold*. The public are demoralized on the subject of *gold*. "Are you not going to fill my teeth with gold?" says nearly every new customer; "Dr. ——— would not think of using anything else." A city operator must have more than the usual quota of courage to stand before the societies and state "he has been using *amalgam* more freely of late." For the first eight years of my practice I would not touch it, because Doctors Elisha Townsend and J. D. White passed their anathemas on everything but gold and tin. I worked myself nearly to death with tin to find it preserves from caries but not from attrition. Since 1862, I have been feeling my way, and while I think I have reared many beautiful and substantial monuments of gold, and have perfected machinery with which to do it, yet I consume more amalgam than ever before.

A gold filling *properly* impacted, with cavity judiciously prepared, and the walls shaped as to forbid future decay, *will save*, irrespective of the frailty of their bony structure? But as thousands of teeth *cannot be so prepared*, both of strong and of frail organizations, and the circumstances *cannot* be controlled, we should resort to something that will enable us the more surely to meet the issue.

To enumerate the many cases of peculiar character that forbid the use of gold, would be too great a task. Physical impossibilities lie in the way of every undertaking; and it is for the successful engineer, who is well acquainted with his material, and their relative strength and *adaptability* for his purposes, to so use each, that his design will be consummated, and which shall not by future wear, prove a failure. There is a fitness in every material that experience has proven to be specially adapted for a given work, and when this general law is recognized and we become first-class engineers, we shall the better see where we can adapt our materials to the work to be done, and we can

be the more certain of success, for it is founded on the logic of mechanics and physical law.

Where is the dentist that first lays out his design and orders materials best adapted for specific portions of it?

As well say everything should be made only of iron, or steel, or wood, as that every tooth should be filled with gold; or, as *equally ridiculous*, that amalgam or some one of the plastic fillings should be the only material used.

It is not *necessary* to found a *creed or departure* on a law of *incompatibility* to tooth substance. We need not look so far into the unknown and unknowable. We poor, short-sighted creatures must have the tangible; not a hypothesis on a *supposed theory*. Any one with half an eye can see just where the incompatibility is; not between gold and dentos, but between dentos and untutored and unskilled brain and hands to *carry out the law of adaptability*—the correlation of forces involved.

One skilled in the use of the mallet, with the rubber-dam and a substantial starting point, with walls ever so frail, can perfectly impact and complete the work in gold filling, *provided the surroundings are there*. But allow *one little vacuum* between the tooth substance and the filling, and a *capillary tube* will be formed to suck up *fermentable material*; the *acid generated* will act on the tooth whether it be filled with gold, amalgam, oxyphosphate, or gutta percha. A thousand capillary tubes making porosity in the gold or the amalgam, will not do it; but if there is one, however small, between dentos and filling, destruction is sure.—[Transactions of the Odontological Society of Pennsylvania.]

A big mouth.—After reading O'Kelly's article "Who can beat this for a big mouth," and note by the editor in July ITEMS, I was led to measure a plate I had just made, I found it to be one sixteenth of an inch short of three inches inside; I did not measure it from front back through the center, as dentists vary the length of plates, however, it was well proportioned. All these big mouths you observe are of women. I would like to hear from other "*big mouths*" and know whether the gentler sex have the biggest. I might add that the smallest plates I have ever made by far have been for the ladies.

Yours truly, ALBERT LUTHER.

Dr. C. W. Spalding, of St. Louis, Mo., says: "Mrs. M. W. J.'s book on children's teeth is the very best of its class, having no equal, in his judgment, for placing in the hands of mothers."

SEIZURE OF ARTIFICIAL TEETH.*

Below is a notice of sheriff's sale on execution that has no equal in our experience, it being the public sale by the sheriff of the county, of a set of artificial teeth, seized and extracted from the defendant's mouth by order of the court, to satisfy a claim for their manufacture. The teeth have been used for a number of weeks but are claimed to be as good as new, and we have no doubt on the day of the sale the sheriff will permit all bidders to try them if they desire to do so, before the purchase is concluded. The peculiarity of the unique seizure and sale, makes it necessary to offer a word of explanation. The teeth were made by plaintiff on an order of defendant, and taken from the plaintiff's office during his absence. Payment for them was refused, and executions delivered by the court to seize property to satisfy the judgment rendered in suit to recover being repeatedly returned unsatisfied, the court, as a great moral example and warning, ordered the sheriff to seize and sell the teeth.

SHERIFF'S SALE ON EXECUTION.

State of Minnesota, District Court, Rice county, S. T. Clements against A. B. Carothers.

WHEREAS, the judge of the said court by an order filed in proceedings supplementary to execution in the above entitled action, on the 2d day of July, 1885, duly directed and required the above named defendant to deliver to the sheriff of said county, the upper set of false teeth made by the plaintiff for the defendant, to be applied by said sheriff toward the satisfaction of the judgment rendered in favor of the plaintiff and against the defendant in said action, and the said defendant having delivered the same to the undersigned as such sheriff pursuant to said order;

Now, therefore, notice is hereby given that under and by virtue of a writ of execution issued out of and under the seal of said court, upon a certain judgment duly docketed therein on the 19th day of May, 1885, in favor of the plaintiff and against the defendant, in the sum of \$21.10, I have levied on the upper set of false teeth, aforesaid, as the property of the said defendant, and will sell the same at public auction to the highest bidder for cash, at the south front door of the court house in the city of Faribault in the county and state aforesaid, on the 18th day of July, 1885, at 2 o'clock in the afternoon of that day, to satisfy the amount due thereon.

ARA BARTON,

Sheriff of Rice County.

I W I

A. D. KEYES,
Plaintiff's Attorney.
Dated July 6th, 1885.

"LETTERS FROM A MOTHER TO A MOTHER."

(Officially Endorsed by the Southern Dental Association.)

It will be remembered by those present at the final session of the Southern Dental Association, in April last, that during the discussion of the subject of "Dental Literature," Dr. Teague, of South Carolina, moved that the Association take public recognition of the work of "Mrs. M. W. J.," a work, he said, having "not only a national reputation, but a world wide fame." He moved that the thanks of the Association be tendered the author.

* Dr. S. C. Clements, of Faribault, Minn., sends us this case in practice, as noticed by the village papers.

NEW YORK STATE DENTAL SOCIETY AND DR. KINGSLEY.

EDITORIAL IN "ODONTOGRAPHIC JOURNAL."

At the late annual meeting of the State Society occurred a series of events, one at least of which has provoked comment unfavorable to the society and its membership. The first of these, and perhaps the most important, was the change effected in the Board of Censors by the election of Dr. Wm. Carr to the place so long and ably filled by Dr. Norman W. Kingsley. The proffered reasons for the change are numerous, but, so far as we have been able to ascertain, they are in general and in particular hopelessly involved, inadequate and inconsistent,—no two of the members we have seen giving anything like the same reasons, or version of causes, that lead to and culminated in this questionable procedure. It was a change without justification so far as the good of the society is concerned, and had its origin in personal feeling on the part of a few who were determined to get even with an old enemy, and use the State Society to further their individual dislikes. It was not because they wanted to see another man in the Board, but rather that they wanted to put Dr. Kingsley out, and when it was learned that he had been telegraphed for and had gone home, then came their opportunity to inflict that stab in the back which resulted in the defeat of this chief of censors, and that prompted him, on receipt of the news, to forward to the President his resignation as a member of the society—a course he could not well avoid and still maintain his self-respect. To Dr. Carr, who also has "done the State some service," the announcement of the ballot was a painful surprise, one of the effects of misapprehension based on misrepresentation of facts. He was in the hands of supposed friends, and was made Censor before he could make clear to himself what had happened. Granting that another man was wanted to represent the first district, no better could have been found; nevertheless the results are painful to contemplate—the estrangement of two friends, the loss to the society of a member whose name alone was "a tower of strength," the society's assurance that long and honorable service is no guarantee that one will not be shelved, even while in the full enjoyment of his well-earned honors, and the publication to the world of a chaotic state of feeling, in what should be the most orderly and harmonious of State organizations.

The third edition of this little work, "Letters from a Mother to a Mother, on the care of the Teeth," carefully and thoroughly revised by the author, is now offered to the profession, with the official endorsement of the Southern Dental Association, and the unqualified recommendation of the best men in the profession, both north and south.

TWENTY-FIFTH ANNUAL SESSION OF THE AMERICAN DENTAL ASSOCIATION.

[Reported for the ITEMS by "Mrs. M. W. J."]

Crossing the Mississippi river for the first time since its organization in 1859, the American Dental Association held its twenty-fifth annual meeting at Minneapolis, August 4 to 7 inclusive. For permanent members present, for new members admitted, for non-members in attendance, for scientific and practical papers read, and for interest and animation of discussion, it was one of the best meetings ever held. Two hundred and fifty-eight members paid their dues, with the unprecedented number of one hundred and three new members enrolled.

The *tally* of the "elevator boy" showed over ten thousand persons carried up and down during the four days of the meeting.

The officers were all punctual at their posts. The dental journals and the local press were represented by an unusual number of reporters, and there were many ladies in attendance. The number of young dentists was quite remarkable, as also the many men of portly presence.

Of the distinguished practitioners present may be named—

Drs. Atkinson, Abbott and Carr, of New York; Drs. Allport, Baldwin, Brophy, Crouse, Cushing, Harlan and Marshall, of Chicago; Drs. Foster, Waters and Winder, of Baltimore; Drs. McKellops, Morrison and Spaulding, of St. Louis; E. Parmly Brown, of Flushing; W. C. Barrett, of Buffalo; J. J. R. Patrick, of Belleville, Ills.; H. B. Noble, of Washington; H. A. Smith, of Cincinnati; J. W. White, of the S. S. White Manufacturing Company, E. T. Darby and C. N. Pierce, of Philadelphia, and many others.

The Baltimore College of Dental Surgery, the oldest dental college in the world, was represented by its able dean, Prof. R. B. Winder, and by Prof. W. P. Finney.

Prof. Taft, the representative, founder and dean of the Ohio Dental College, also represented the dental department of the University of Michigan; Profs. Ingersoll and Kulp, the State University of Iowa; Prof. Morgan, the Vanderbilt University, and Prof. Pierce the Pennsylvania Dental College.

Several rooms were occupied by an unusually fine display of dental instruments, appliances and materials.

Over 200,000 teeth were on exhibition, about 100,000 being from the S. S. White Manufacturing Company. The report of the treasurer at the opening of the meeting showed a balance on hand of nearly \$2000, which was largely increased before the adjournment. In view of this very satisfactory financial state of affairs, it was voted to appropriate the sum of \$200 each to sections V, VI and VII, for the prosecution of original scientific investigation and research.

The secretary announced the death, since the last meeting, of Dr. J. G. Ambler of New York, and Dr. Isaiah Forbes of St. Louis. Suitable memorial resolutions were adopted. A resolution was also passed in memory of General U. S. Grant.

A communication was received from the Committee on Memorials of the Women's Christian Temperance Union, asking that resolutions be adopted, commending the efforts being made to educate the people in regard to the laws of Hygiene and Heredity, and discouraging the use of alcoholic stimulants. Dr. Peirce of Philadelphia moved the adoption of the resolutions offered, but on motion of Dr. Spalding of St. Louis, seconded by Dr. Barrett of Buffalo, it was laid on the table as foreign to the science and practice of dentistry.

The first paper read was presented by section VII, Physiology and Etiology; subject—The Earthy Phosphates, by Dr. W. C. Barrett. This was an elaborate argument, on physiological grounds, against the administration of the inorganic earthy phosphates, maintaining that all inorganic substances must be elaborated and organized by the vegetable kingdom before they can be assimilated into animal tissues.

After being assimilated and once organized by the herbivorous or grannivorous animals, they form food for the carnivorous animals, being thus twice organized for the latter class; the degree of organization of pabulum decreasing the length of the alimentary tract—in the carnivora it being only about five times the length of the animal, while in the omnivora it is thirty times the length of the body. Inorganic matter as swallowed by certain animals, only serves a medicinal purpose, or—as used by man—to correct dystrophic conditions by abnormal peristaltic action; but never serving as food. Chloride of sodium, which forms an apparent exception, serves principally to promote osmosis and exosmosis.

In the discussion which followed, Dr. Spalding of St. Louis, and Profs. Pierce and Darby of Philadelphia, opposed the position of the essayist; it was sustained by Drs. Atkinson, Ingersoll, Patrick, Morgan and Abbott. Dr. Atkinson said that the same article might be food, medicine or poison, according to the condition and demands of the system.

Section III—Dental Literature and Nomenclature—reported two papers, one from Dr. Atkinson and one from Dr. Kulp. The paper of Dr. Atkinson was entitled "Ripening and Ripeness." This paper was most thoroughly condensed, being scarcely more than a collection of aphorisms. He said that perspicuity of nomenclature demands the settlement of the question of germs—the foresteps in kingdom, class, order, genus, species and variety; the first requirement being to determine the lowest form of body capable of storing heredity. We cannot account for the origin of atoms, molecules being the first form

of differentiated body. When molecules are arranged in regular order corpuscles are produced ; thence tissues and systems of organs.

Ether is the diffusion of atomic mass ; thence gas, vapor, water, colloid, and solids. Air supports combustion, water puts it out, and the earth is formed by the precipitation of the ash and the dissipation of the gas.

Dr. Kulp, of Davenport, Iowa, read a very practical paper, systematically classifying the teeth and their surfaces, so that each term conveys a definite idea, clearly locating every possible cavity, in terms brief and definite. The system proposed, met with general approval, as being simple and uniform. Dr. Spalding, of St. Louis, expressed the hope that the profession would be educated into its general use. There was some discussion as to the choice of the terms occluding, grinding or masticating ; occluding being adopted as most generally applicable, signifying simply *bringing together*.

Section IV—Operative Dentistry—reported one paper, Painless Operations, by Dr. J. A. Robinson, of Jackson, Michigan, and several subjects for discussion, *viz.*: Bridgework, the Herbst method, The Perry Separators and Matrices, Half-bicuspid Crowns, and An Appliance to Regulate the Exhalations of Patients.

Dr. Barrett read the paper of Dr. Robinson, the subject of which was Local Anæsthesia, and the superior advantages of carbolized-potash ; also the merits of textile-foil as preventing all shock from thermal changes.

Dr. E. Parmly Brown opened the subject of bridgework, illustrating by some beautiful specimens of his own work. He said veritable bridgework was used 2000 years ago ; another proof that there is " nothing new under the sun." Dr. Kulp spoke of the great advantage of bridgework in capping some of the teeth and opening the jaws where the teeth are abraded and sensitive.

Dr. Rhein explained his modification of the Herbst method. He avails himself of this method for its superior adaptability of gold to the walls of the cavity, without pits or undercuts, finishing with the electric mallet for condensing the surface and contouring, using the original German Wolrab's gold—annealing very slightly, for the mallet ; using thin steel matrices, held in place with heated shellac for approximal cavities. The general conclusion of the discussion was in favor of eclecticism, combining the various methods, according to the necessities of each case. The matrix was generally held in favor, but Dr. Taft advised the younger members to first learn to work without it, then use it when necessary—not relying on it for every case. Matrices were exhibited by Dr. Darby, of Philadelphia, made of phosphor-bronze, which is pliable and malleable, and capable of ready adaptation to space.

Dr. Noble, of Washington, showed a modification of the Howz crown, a half-bicuspid porcelain front, which restores the bicuspid without building up, and making a strong and useful operation. Dr. Noble also explained a recent invention of Dr. Donaldson, for cutting barbs all around his broaches, but not in a circle.

Dr. Southwell, of Milwaukee, exhibited a most ingenious appliance for placing under the nostrils of a patient for the purpose of throwing the exhalations of respiration upward and to the right or left of the operator, thus preventing the inhalation by the dentist of the warm breath of the patient, the impurities of which are a fertile source of disease.

Dr. A. E. Matteson, of Chicago, exhibited a splint for retaining replanted teeth, which had been used successfully where the four superior incisors had been knocked out by a fall and the process broken off, hinging at a point near the foramen of the teeth. He also exhibited his gold crowns, made of soft gold and lined with platinum, made in perfect contour, but readily altered to meet the antagonizing teeth; also his anterior crowns, consisting of a porcelain front cemented with oxy-phosphate to a shell of platinum and gold; the latter anchored to the root with amalgam. In the discussion which followed, Dr. Morgan said one of the most essential points, in crowning roots, was the proper preparatory treatment of the root itself.

Wednesday afternoon was devoted to clinics, with Drs. Smith, of Minneapolis, Gardiner, of Chicago, and Field, of Detroit, as the committee.

Drs. Timme, of Hoboken, and Rhein, of New York, illustrated the Herbst method; Drs. E. Parmly Brown, Noyes, of Chicago, T. T. Moore, of South Carolina, and St. John, of Minneapolis, made contour fillings in incisors and bicuspid; Dr. A. W. Harlan treated several cases of *Pyorrhea Alveolaris*; Dr. Matteson placed one of his porcelain front crowns on a lateral incisor; Dr. J. J. R. Patrick exhibited his process of striking up gold crowns; and Dr. J. A. Swasey, of Chicago, showed the working of his apparatus for making corundum points.

Section V—Anatomy, Histology and Microscopy—reported a paper from Dr. Frank Abbott, entitled "Studies of the Pathology of the Enamel of Human Teeth, with special reference to the Etiology of Caries," and a paper from Dr. L. C. Ingersoll, entitled "The Dental Alveolar Membrane: Unity or Duality, which?"

Dr. Abbott described the recently perfected "micro-stereopticon" of Strucker, of Vienna, an invaluable aid to the microscopic study of tooth-structure, which, with the ordinary slide, magnifies 1200 diameters. His paper was an exhaustive treatise on the Etiology of Caries, which he attributes to congenital deficiencies and imper-

fections in the structure of the enamel; anomalies caused by the condition of the mother during gestation, etc., fostered by local conditions. The paper was illustrated by very fine micro-photographs from Carl Heitzman.

Dr. Atkinson said there was much unwarranted deduction in the paper; that anomalous cases were quoted as in the regular order.

Dr. Brophy thought much considered congenital might be attributed to absorption.

Dr. Keith described a case where the entire enamel cap of a deciduous tooth came away in a regulating-plate, the dentine having been entirely dissolved out, the so-called "carneous body" having apparently grown up above the margin of the gum, eating out the dentine without touching the margin of enamel.

The paper of Dr. Ingersoll was an elaborate argument for the duality of the dental membrane, studied—not from authors who say but little about it—from microscopic observations of sections of the membrane, proving two membranes intimately united but distinct and separable; one lining the socket, the other covering the root of the tooth; the former belonging to the osseous system, the latter dental; of different origin and performing different functions; the one consisting of longitudinal fibrous tissue, the other a net work of cells; a peridental and a periosteal membrane, intimately blended, yet distinct in origin, in character and in function.

Section VI.—Pathology, Therapeutics and Materia Medica—reported three papers.

The Catarrhal Nature of Pyorrhea Alveolaris, by Dr. J. D. Patterson, Kansas City; Pyorrhea Alveolaris and Sponge-grafting, by Dr. William H. Atkinson, New York, and a general report on the progress made during the year, by the chairman Dr. A. W. Hanlan.

Dr. Hanlan said there were no important discoveries to be recorded, except the investigations of Miller of Berlin, of which the vast import was not yet generally comprehended or appreciated. There had been placed on record two cases of actino-microsis in the human subject—the "lumpy-jaw" so fatal in cattle, but not fatal to man, as proved by these two cases, one of which recovered without treatment. He said that his experience led him to attribute far more efficacy to Cannabis Indica than to any form of Cocaine, for obtunding sensitive dentine. He also spoke of the great value of Resorcin and Terebin to the dental practitioner.

Dr. Patterson of Kansas City read a well-considered paper on the Catarrhal Nature of Pyorrhea Alveolaris, a study of the comparative pathology of pyorrhea alveolaris and catarrh, in the similar affection of the mucous membrane, in the character of the exudations,

in infectiousness, in the features of ulceration, absorption of bone, production of necrosis, and other evidence, all pointing to similarity of origin and nature; evidence being also found in the fact that alleviation of catarrh produced corresponding amelioration of pyorrhea.

Dr. Atkinson said there was often imperfect elimination of uria precedent to pyorrhea.

Dr. Marshall, of Chicago, spoke of cases of Pyorrhea in conjunction with Bright's Disease, when all treatment of the former was futile till the latter was mitigated.

The same was true in the case of ladies with uterine troubles. When the latter was relieved, Pyorrhea was cured without local treatment.

Dr. Atkinson read a paper on Sponge-Grafting in Pyorrhea.

He gave as local treatment, in the different stages:

When there was slight recession, and no discharge—Elixir Vitri in full strength;

When the destruction was greater—Aqua Regia 1 to 3;

When the loss was still greater, with the gums dark, with exudation of pus and bloody serum—the Carbolized-potash paste, known as Robinson's Remedy.

When the loss is very great, with the roots largely exposed, and no opportunity of covering in pockets to secure new growth, use the sponge-graft. The sponge is sterilized in a solution of bi-chloride of mercury, 1 to 500 or 1 gr. bi-chloride to 1 oz. distilled water, 130° F. Higher temperature would shrivel the sponge, or cook the material that is to be absorbed. The sponge must not be removed or disturbed. When the loss of substance is very great, the sponge can be retained in place by tying the loose teeth and taking an impression, build up the lost tissues with wax and make a cast; strike up a tight pocket of platinum and iridium, putting the sponge into the pocket. If pus exudes at any point, or the sponge discolors, cut off till red pabulum is reached; then disinfect it and put in a small bit of fresh sponge, not disturbing the adhering portions.

Dr. J. G. Templeton reported good results from the use of copper-sulphate, or blue stone, in the pockets, once a week.

Dr. King, of Nebraska, considered the salivary deposits the immediate cause of Pyorrhea.

Dr. Ingersoll said they were the result, not the cause.

Dr. Frank Abbott exhibited his very superior atomizer, or spray instrument, with adjustments by which the spray of listerine or other fluids can be thrown in every possible direction, and reach every point, as the posterior nares, every part of the antral cavity, the folds of mu-

cous membrane, etc. It has a pressure of 60 lbs., and can also be used dry as a chip-blower, with a continuous stream of air; also for hot air.

Section I.—Prosthetic Dentistry, Chemistry and Metallurgy. Dr. William H. Trueman read a paper describing a new method of putting up rubber work, also applicable to celluloid, which dispenses with the use of wax, try-plate, etc., rubber, softened in hot water, being used instead of wax in mounting the teeth. Another distinctive feature is that of painting the model with a thick coat of rubber cement (rubber dissolved in chloroform) to which is applied heavy foil, termed "surface cohesion form," on which is stamped a pattern somewhat similar to that used for bee-keeper's wax, which gives a net-work of continuous channels instead of one single air-chamber.

The advantages of the method of mounting are cleanliness and saving of time and labor in waxing up, etc. The great disadvantage is that of having no opportunity of trying the plate in the mouth to secure proper expression, articulation, etc.

Dr. Haskell, of Chicago, read a paper, "What to do and how to do it," describing the different steps in making a plate-impres-sion, cast, dies, etc.

He condemned vulcanized rubber as very injurious, destroying mouths, not, correctly speaking, by absorption, but from non-replacement of waste material owing to abnormal retention of heat. He said when an artificial plate became a necessity, all sentiment in regard to removing sound teeth should be cast aside, the object being to make the plate as comfortable and useful as possible.

Dr. Morgan thought the plate should be made to conform to the remaining teeth, rather than sacrifice the teeth to make the plate comfortable.

Dr. Haskell condemned bridgework as doing incalculable injury to the teeth of attachment.

Dr. Atkinson said properly constructed bridgework was a great improvement over plates. That the injury done by rubber was due to an anæsthetizing the sensitive membranes; paralyzing the sensory nerves, and closing the mucous follicles.

Dr. Brophy said the trouble was caused by the unequal temperature of the membrane under the plate, and that around it.

Dr. E. Parmly Brown read an essay on "Dentistry. Its past; its encouraging present; its brilliant future." A paper abounding in elaborate rhetoric, poetic metaphor, and ornate diction.

Section VII reported as subjects for investigation during the coming year: "Normal and Abnormal Oral Fluids"; "The Tongue in Health and in Disease"; "The Personal Hygiene of Dentists."

There was some discussion of the subject of the dental section of

the International Medical Congress. A committee was also appointed to confer with societies and individuals relative to the feasibility of holding an International Dental Congress in 1887. The selection of the place of meeting was left to the Executive Committee; the profession to be notified through the journals.

Dr. W. C. Barrett, of Buffalo, N. Y., was elected President on the first ballot. L. C. Ingersoll, Keokuk, Iowa, First Vice-President; A. T. Smith, Minneapolis, Second Vice-President; Geo. H. Cushing, Chicago, Recording Secretary; A. W. Harlan, Chicago, Corresponding Secretary; Geo. W. Keely, Oxford, Ohio, Treasurer.

Drs. Crouse, of Chicago, Dudley, of Salem, and Thompson of Topeka, were elected members of the Executive Committee.

Section II.—Dental Education, reported their approval of the action of the Association of College Professors, in its details.

The customary resolutions of thanks to the railroads, hotels, press, local committees, etc., were passed, and the president elect installed.

Being conducted to the chair by Drs. Field, of Detroit, and Morrison of St. Louis, Dr. Barrett accepted the honor in a few well-chosen words. He said he would be more or less than human if he failed to appreciate the high honor conferred; that he loved dentists more than any other class of men; that he challenged any man to say he had ever intimated even a desire for the place which he now accepted with tender and hearty appreciation.

The gavel which had been wielded with such grace and discretion was presented to the retiring president, Dr. Crouse, and a committee was appointed to have it suitably mounted and engraved.

The Association then adjourned *sine die*.

Reflex pain.—Dr. Black says: "With regard to this misplaced reference of pain or reflex pain as it is called, did you ever know such a thing as reflex pain when the sense of touch was implicated in the impressions? Touch is the great localizer in the nervous system; it has no other. When touch is involved the central cells have no record of an impression. There is no pain in the liver, or the cornea. The tooth pulp has no sense of touch and hence is incapable of localizing pain. The sense of touch, is requisite for the localization of pain in any part of the body. Pain in the knee in hip disease is an illustration. The pulp of the nerves has the power of transmitting sensations of pain only, and is utterly incapable of distinguishing between heat and cold, as I have frequently demonstrated. The peridental membrane has the sense of touch. Reflex action is not within the control of the will."

Dr. Darby thinks a crown cut off, when broken, and replaced with an artificial one, a safe, good and durable operation.

DR. ISAIAH FORBES.

Dr. Isaiah Forbes, who died at St. Louis, July 15th, 1885, at the age of 75 years, will long be remembered in the west as one of the leading dentists of his day.

He began the practice of his profession in St. Louis in 1837, when the city contained only from eight to ten thousand people. Having studied dentistry in the office of Dr. Ambler of New York, he sought the West as the place most likely to open for him an avenue of useful labor. In this he was not disappointed. He early gained the confidence of the people and retained it through a period longer than any other man that ever practiced in this city. Dr. Forbes was not what could be called a brilliant man in his profession. He had no special aptitude to any one particular branch. He was not a close investigator. Yet he was endowed with that happy faculty of encouraging everything that pointed to a broad and liberal professional advancement. It is not always so much in what a man accomplishes himself as it is in what he helps others to do, that we find the secret of advancement. Dr. Forbes' open, generous face indicated the patron of, rather than the plodder after, scientific truths.

Tall, erect, with a clear, open countenance, elastic step, and infinite grace and dignity, he was the peer of any gentleman in the land.

His standing in society was particularly fortunate. He occupied a position rarely accorded to the dental practitioner. For twelve years he officiated as member of the school board, and for a long time was a prominent worker in the historical society of the city.

His name was never mentioned in connection with any public or charitable enterprise without carrying with it the weight of a leading citizen.

He was not one of the kind that always lived inside of a decayed tooth. While he was proud of his profession he yet had sufficient good sense and respect for the universal fitness of a thing to leave it at home when he moved abroad among his fellow men. J. C.

ST. LOUIS, July 21st, 1885.

The manner in which the oxy-phosphates are used, or should be used, is worthy of note. Probably the best method of making the mixture is to put out the necessary amount of the powder on a slab of glass or porcelain and place the liquids beside it, then mix the two together by thorough rubbing with a broad spatula. This will produce a thorough incorporation of the ingredients, which will then make a most smooth, solid, and compact filling and one capable of withstanding three or four year's wear, outlasting others that have been but indifferently prepared and in the mouth but a year. In introducing the mass into the cavity it should be carefully manipulated

and well adjusted into its place, and not hastily or carelessly jammed into the cavity as is frequently done. Cavities carefully filled in the manner I have suggested will show little or no more wear at the cervical border after a considerable period, than when first introduced. On the most thorough manipulation depends the most successful and satisfactory result. In very large cavities in the crowns of molars that many say can only be filled with amalgam, remove all *debris* and diseased tissue; and when this is done, take a bit of gold (pure) plate, about thirty of Stubb's gauge and fit it to the orifice of the cavity, burnishing over the edges to make it fit snugly, then solder on two or three little loops for anchors, or old platinum pins will answer the purpose very nicely—the cavity is then filled with oxy-phosphate flush with the top or borders, the gold cap then pressed down to its place firmly and evenly, allowing time for the escape of the surplus cement which can be trimmed away when it has thoroughly set; the edges of the cap may now be accurately fitted by burnishing down with a suitable instrument. An operation performed in this way serves all the purposes of a gold filling made over oxy-phosphate, is inexpensive to the patient, and does not consume the amount of time required to introduce foil; in my own mouth I would prefer it to a filling of equal size made of solid gold.—DR. J. TAFT.

Editor ITEMS: Do they wish to know how to make sheet wax? Here is the way. Have made a tin boiler same size as boiler of three flask vulcanizer, only longer, to put on handle. This will fit stove used in vulcanizing. Have an ordinary pail three-fourths full of water; ice the size of your head put in the water; two pieces of glass, say 4 x 8 inches, stand them in the water; melt wax in boiler and add to wax about one-half pint of water and have enough wax to make boiler nearly full when melted. After wax is melted lift off stove and place near your ice water. Now take one of the pieces of glass and run to bottom of boiler, raise out quickly, scrape off edges of the glass, with knife, and put back in the ice water, and two as nice sheets of wax will fall off as you ever used. Let glass just used remain in water to get cold while you use the other, and in two hours time you will make enough wax to last quite a while, I assure you.

P. S.—If you will address me with stamp I will tell you where you can get all your wax free of cost.

Truly,

JAMES W. CORMANY.

MT. CARROLL, Carroll Co., Ills.

To disguise the odor of iodoform, Mr. P. E. Smith, of Pinekneyville, Ill., says adding the best oil of lavender, will almost if not entirely disguise the odor of it.

KEEP A RECORD.

The last ITEMS says that it is a "good plan to keep a record of plastic fillings in order to learn their comparative value." Aye! I can endorse that. And I can say further, it is a good plan to keep a record of *all* of our professional operations. Every dentist should be provided with a register, having cuts in it, in which he should record and mark every filling inserted. He should note the *kind* of filling—the treatment the tooth received—the name of patient—the date, and the charge, and any other remarks peculiar to the case. I have pursued this course more than fifteen years, and it has frequently been a satisfaction both to me and to my patients; besides, it has saved me some money in not being obliged to refill other dentists' cavities. Patients cannot always remember exactly which is *my work* and which was done by *some one else*. The record can always settle the dispute, if any occur.

G. W. ADAMS, D. D. S.

[This was our practice for twenty years, and besides this we gave our patients a fac-simile.—Ed. ITEMS.]

Oxyphosphate for Setting Crowns.—Dr. Essig, of Philadelphia, says: Fifteen years ago I used gutta-percha exclusively in setting pivot teeth, with good results as a rule, though occasional failure occurred, in consequence of the gutta percha being overheated in setting the tooth. The variable quality of the gutta-percha furnished by dealers will also prevent uniform results in its use. I have, therefore, long since abandoned it for oxyphosphate of zinc, which requires neither force nor heat in its application; and is, therefore, less likely to incite periostitis. It is inferior to gutta-percha only in the difficulty of removing the pin, when the porcelain tooth is broken, necessitating the use of a fine fissure-drill to cut away the cement from around the gold or platinum wire in order to obtain access to the canal.

"LETTERS FROM A MOTHER TO A MOTHER."

In the discussion of the subject of Dental Ethics, at the recent meeting of the Southern Dental Association, Dr. H. J. McKellops, of St. Louis, after vigorously denouncing the practice—of which too many dentists were guilty—of signing "certificates" recommending all kinds of nostrums, for the purpose of getting their names in print and before the public, said that the best way a dentist could advertise himself, getting his name honorably before the public, and at the same time benefitting his patients, would be to purchase a large quantity of the little books of "Mrs. M. W. J."—"Letters from a Mother to a Mother"—and placing his card on the cover, distribute them far and wide; that this would be better, both for the profession and for the public.

Editorial.

LITTLE ERRORS IN THE ART OF COMPOSITION.

SUPERFLUOUS WORDS.

"This work will have to be done over again." Is there not a word here we can expunge, and yet leave a better sentence? So in "Let us revive our old friendship again." "Let him return again and I will pardon him." Unless in these sentences a *second repetition* is referred to, "again" is worse than redundant.

"The apples are of different size, but both alike, are sweet." Why not say, both are sweet. It is equally improper to say, "The roads are very different in conveniences, but both are alike safe;" "Men vary in their tempers, appearances and capacities, but all are alike human;" "The wrecked passengers were composed of men of all nationalities, colors and conditions, but all alike were saved."

"Both are alike" is improper as "both are brothers," or, "those two boys are both alike." Both cannot be coupled with "alike." Why not say simply: They are alike; they are brothers; those two boys are alike?

At first thought it may seem foolish to find fault with, "In the race all have an equal advantage." But by a little closer scrutiny you will be inclined to ask, of what use is "equal?" It is not only useless but inadmissible, for how can all have an equal advantage? The terms of the race may be equal, and the age, strength, and preparations of the races equal, but if there was any advantage in the race it could not be equally divided. Advantage is some quality of superiority one has over another.

"We all agree together in this." Would not this sentence be better without "together?" So also in these: "They were bound together by a solemn oath;" "They were joined together in holy matrimony;" "The chain broke, but it was soon welded together again."

"Many of these sentences are made clearer, and all of them are improved, by their brevity," is faulty; so are the sentences: "Many of them could not be improved;" "Many of them had to be reconstructed;" "The apples were good, but so many of them were small they were not marketable." In all such sentences expunge "of them."

So also "all of" is redundant in the phrase "all of which," as in the following sentences: "Many things had to be considered before he could accept, all of which should have been appreciated by them." If you wish to emphasize the fact that *all* are intended, even then the phrase should be *all which*, instead of *all of which*.

"Another one has fallen." "Each one was counted carefully." "Each one of us did our [his] best." "There was for each one o

us a surprise in reserve." Why not suppress "one" in the first two sentences, and "one of us" in the last two? Still more redundant is "Another one of our number has left our company."

Still worse is the phrase, "each and every one;" as, "Each and every one walked with firmness." "Each and every one give [gives] us an illustration of patient perseverance." "How could we resist them when each and every one of them were [was] ready to die for success." How much better to have one word do the work of five.

"There were other ones in the ranks we could mention with pride." Why not say, "there were others in the ranks?"

"We admired the bedrooms of his house for their ventilation." "The books of his library were good selections." "As penitents they set at the foot stool of his feet." "The fingers of his hands, the toes of his feet, the hair of his head, and the teeth of his mouth were all examined closely." How much better, as well as briefer: "We admired his bedrooms for their ventilation; his books were well arranged; they all set at his foot stool; His fingers, toes, hair, and teeth were all examined closely. Of course his fingers were "of his hands," his toes were "of his feet," his hair was "of his head," and his teeth were "of his mouth." And why say it was the foot stool *of his feet*?—that the books were *of his library*?—that the bedrooms were *of his house*?

How frequently we write such a sentence as the following, without the consciousness of a superfluous word: "He soon found out his mistake." But suppress "out" and see if you have not a better sentence. So with: "I will follow this thing out to the bitter end." "He cleaned out the cavity carefully." "He swept out his office daily." "He cleaned out his mouth with the greatest carefulness."

So is often redundant; as, "Never more so than now." "As much so as ever."

"It is not that that that was criticised, but that that that that man complained of that we regretted that should have been used." How often *that* is a redundancy. Why not relegate all the *italicized* thats in the following sentences?—"He declared *that* the prices *that* I had charged were too high. But I knew *that* the work *that* I had done was well done, and that therefore the bill was reasonable. I also knew *that* all *that* I could do to show *that* this was so had been done." "Dr. Wright said *that* some teeth *that* he filled were of such form *that* they could not be properly cleansed." "Dr. Moore thought *that* if this subject were [was] better understood *that* more teeth would be saved."

In, "I have given to it my especial attention" there is a redundancy. Besides putting the superfluous *e* on *special*, of what use is "to" in the sentence? It is merely keeping up old style to say "I have given *to* your teeth my best services." If you will give *to* work the attention you give *to* pleasure you will prosper."

"Bind them together in one bundle and burn them, appears right, at first view, perhaps; but look carefully and tell us of what use is "together?" So in these sentences: They conversed together in a low tone." "They were together in each others company for some time." "They met together as friends."

"In order to converse by ourselves we went into the next room." Here is a common redundancy. The same as in the following: "He was persistent; and in order to convince him of his error I was obliged to extract the tooth." Of what use is "in order"?

"Many persons need trimming up a little to appear to their best advantage." Besides the unnecessary "persons," of what use is "up?" So in, "I see you have closed *up* Brown's saloon;" "Rise *up* and let us be going;" "This roused up his passions." So with the word *down* in the class of sentences following: "That horse needs a thorough combing down." "Clean down the shelves and prepare for the new books." "Sit down here and let us talk over the subject."

"Such growths are often met with." "I first met with him in the park." Would not such sentences be as perfect without the "with"?

But it is not our purpose to exhaust our subject. The specific character of our journal will not allow it. A few hints, however, may not be amiss.

Does Amalgam Produce Inflammation of the Teeth? was the subject of discussion in the late meeting of the Pennsylvania Dental Society. It will be seen by the report of Dr. Trueman on another page that some cases were referred to which, to say the least, were mysterious; and yet as Dr. Trueman, who closed the discussion, said: "We all know how slight a cause will occasionally produce exostosis, and how frequently deviation from the normal condition is met with where there is no apparent cause, and where the teeth and their surroundings appear otherwise healthy. He was reminded of discussions on the same subject forty and fifty years ago. Those who stood quite as well with the profession then as we do now, related cases where they had inserted amalgam fillings in teeth that had been dead for years, without any previous treatment, and when the inevitable alveolar abscess made its appearance it was believed to be caused by the poisonous effect of amalgam. These cases are constantly cited as reasons why amalgam should never be used in the mouth. Those who spoke then, undoubtedly gave utterance to their honest convictions. In the light of the present, we are amused at their blunders. This should teach us caution."

Many years ago a young lady came to us to have two molars filled. The cavities were very small but very sensitive. She could

not bear the treatment for their preparation. We therefore placed in each a small quantity of arsenic, and covering this with wax appointed another day for the filling. When she came we were of course able to fill them without pain, and she was delighted. Six weeks after this she was sent back by a homeopathic physician 'to have that poisonous amalgam removed and gold substituted.' The teeth had become exceedingly tender and loose. I removed the filling and substituted gutta-percha, but soon afterward was obliged to remove the teeth. I was ashamed to confess the real cause of the trouble and of course both patient and physician believed amalgam was the cause of the trouble. It was not long after this we kicked arsenic out of our office and never used it even to kill nerves. We filled many teeth with gold for this young lady during many years following this incident; but her teeth were so extremely sensitive the fillings in several were followed by inflammation, though in each case finally controllable.

We remember filling the crown surfaces of posterior teeth for a young gentleman who afterward returned saying his teeth were so sore he could not occlude them without pain. He was confident the amalgam was poisoning them. The trouble was, we had filled them a little too full. Grinding off their surfaces removed the cause. We have had many such cases; every dentist of experience has, and sometimes nothing will satisfy our patient but the substitution of some other kind of filling.

Of course neither of the above causes may have been the trouble in the cases cited at the Pennsylvania Society. We should all be cautious in attempting to explain cases the details of which we are unfamiliar with.

About six weeks ago my daughter had a large gold filling put in a second bicuspid. Three weeks afterward it began to be sensitive to heat and cold; severe darting pain would pass through it till, in two weeks, it became unbearable. The filling was removed and a temporary filling inserted, when all trouble ceased. What a pity this filling had not been amalgam, so that we could have charged the trouble on its "poisonous effect."

Some of our Minor Corrections in Composition are objected to. A popular writer had the following sentence in an article for the ITEMS: "It is not our purpose to enter upon a discussion." We altered the "upon" to on. When he read his proof he changed it back to upon. Yet, if we had asked him his reason, we presume he could not have given one.

Some seem to think it is almost sacrilegious to "disturb the dialect of our fathers." But really it is being disturbed continually, in the sense of being modified—every *live* language is. Because, for instance,

Englishmen have spoken of "disannuling a contract" we should not now be deterred from speaking of a contract as simply annulled. And, in spite of custom, if we can give no reason for prefixing to though an *al*, to move (to change places) a *re*, to till an *un*, why should we continue these prefixes?

We believe there has been no fault found with our distinction in the use of alone and only; but with the difference between affect and effect, we fear we did not make ourselves clear. If it is born in mind that to affect is to act on, and that effect is the result of the action, the distinction will be plain.

Some object to our restriction of the word *balance*. They persist that "the balance of my journey was rough," "the balance of my essay will appear next month," and "the balance of my account was \$2.50," (when speaking only of the last payment) are correct sentences. But there will be no difference between us if we all bear in mind that "balance" can only be used when the thought is in harmony with the whole figure of which balance is a part. This figure refers to the transaction of weighing by the scales, where the coin representing our indebtedness is on one end of the beam, and at the other end, what is insufficient to balance the scales. Now we add what will do this. This last makes the scales balance, but is it the balance of our account? Or, is this, plus all that was previously there, the balance?—It required all to balance our indebtedness.

NORMAN W. KINGSLEY,

Undoubtedly if the dental profession were asked to designate twenty-five of the most skilful, intelligent, and prominent dentists in the world, Dr. Norman W. Kingsley would be one of the twenty-five. His eminence in the profession is so acknowledged, his character so distinctive, and his popularity so universal, his selection would be instinctive.

For such a man not to be a target for the diminutive and the jealous, he must be dead.

The recent action of the New York Dental Society is another evidence that usefulness, faithfulness, and efficiency, are no safeguards against disgrace from the multitude. It may be we received a wrong version of the society's action. We certainly shall be pleased if this is so.

Hard rubber and corundrum disks, for separating teeth, finishing gold fillings, and even cutting natural teeth must be used to be appreciated. They are better than the diamond disks, better than any thing for these purposes yet brought out.

The Cause of General Grant's Cancer.—"The cause of the disease in this case is largely conjectural. Epithelioma, as a rule, starts from local irritation, and, unlike other forms of cancer, is not dependent on hereditary predisposition to the disease. There must, however, aside from this, be a latent tendency toward cancerous troubles. It is quite probable that the irritation of smoking was the active cause of the cancer in General Grant's case or at least it is fair to presume that he would not have had the disease if his habit had not been carried to excess."—[Extract from the report of his physicians.]

The closing clause in the report of the cause of the General's death is a warning which should be heeded by all users of tobacco. When a physician, we had a similar case under our treatment. We hope never again to witness a death under similar circumstances.

Instruct Your Patients.—The other day a layman said to us: "I like to go to Dr. Flagg for my dental work, I receive so much dental instruction while he is working for me. He is always entertaining his patients about something interesting and instructive."

Dr. Flagg has done much for the dental profession; his lectures and public instructions are invaluable, and no dentist can be in his presence in his office or elsewhere without being the wiser for his practical instruction; but beside, he is doing a great work daily by making his patients intelligent on the history, nature and care of their teeth.

Teeth specially sensitive to thermal changes, after being filled, should be attended to promptly. Whether they are sensitive from a breath of air, or from hot or cold fluid, the filling should be removed, however large and expensive it may be, and the cavity filled with oxyphosphate. By this means, this sensitiveness will almost always leave the tooth in a little while. Then a metal filling may be replaced without after trouble. But even when the metal is again used, it is much better and safer to leave in the cavity as much of the oxyphosphate as possible.

The Philadelphia Dental College makes its twenty-third annual announcement. It is certainly in a flourishing condition. Its connection with the hospital of the medico-chirurgical college is so close and advantageous that it is well worth considering by students wishing a thorough dental education. Its president, Dr. James E. Garretson (who is also president of the medico-chirurgical college), is the author of one of our best works on Dental Surgery, and he is an admirable teacher.

Prof. J. Taft, of Cincinnati, moved in the last Southern Dental Association that the association recommend to all practicing dentists, for circulation Mrs. M. W. J.'s book, "Mother to Mothers."

In the Report of the Pennsylvania Dental Society, Dr. Trueman shows the same wonderful ability to present to our readers the most important thoughts eliminated, as he did in his report of last year's deliberations. Undoubtedly there was much of importance said which he does not record, but certainly what he does notice is well presented and of decided interest.

Our Report of the American Dental Association is well worth reading. Though it is long, it is a marvel of brevity. Our reporter, "Mrs. M. W. J.," has shown great ingenuity in presenting so clearly, in such a short report, the salient points of the doings of a three days meeting so crowded with masterly discussions of so many important subjects.

To present this report in full we are obliged to carry over to October several articles we had in type for this number.

Gold Pointed Amalgam Carriers.—One who has used one assures us that it is far preferable to steel, as by it amalgam can be picked up in large or small pieces and carried to any part of the cavity with perfect ease.

To utilize broken separating files it is only necessary to fasten them to any metal handle by soft solder. The heat required in soldering is not so severe as to draw the temper of the working part of the file. A bit of old britania impression-cup is good for solder, and for a flux a drop of chloride of zinc. First scrape the surfaces of the file and the metal handle where they are to be united.

What is the matter with the Dental College of California? From private letters received, we should judge that this institution lacked an efficient corps of teachers. Are we mistaken?

Is Phosphoric Acid Combined with Zinc Injurious?—"In the 'Setting' process it would seem that sufficient phosphoric acid is set free to slowly but effectually devitalize the pulp, even though a considerable septum of dentine intervene."

How strange that so many men will write before they think. Had Dr. Landrum considered for one moment the effect of mixing the zinc with the acid he would have known there was no phosphoric acid to be set free after the mixture sets. The effect of the two being brought together is to *immediately* neutralize both, and this is what causes the setting.

Miscellaneous.

A NEW RIVAL OF QUININE.

An alkaloid derived from the inner bark of the pear tree, has cured cases of intermittents which have resisted quinine and arsenic. The alkaloid is called "pereirine," and is given in quantities of thirty grains per day. Dr. Ferreira, of Brazil, considers that it may become a rival to quinine, and Dr. Baker, of Brazil, thinks that it is destined to become a great blessing to malarial regions.—*Medical World*.

We quote the above article on quinine to confirm the fact that any bark that is not decomposed by atmospheric action can be converted into quinine merely by a great decomposition of the substance. Only a burning of the substance of a bark produces quinine. A burning of any substance that is only a decomposition of mica will furnish quinine. The burning must be of the most intense character. If it is not the substance produced will be only a sodium. Sodium more burned becomes quinine. All the great expense and wonder and useless discussion over a bit of quinine is the consequence of an ignorance that a bit of bark that has not been exposed to the atmosphere will produce quinine if sufficiently burned.

The substance can be made as plenty as ashes, and as cheap. The action of soda and quinine are identically alike except in extent. No scientist on earth can detect the slightest differences in their character or effects, except in the amount of stimulation each performs. Both are simply white ashes. A tobacco leaf that is fine looking and not decomposed by exposure to the atmosphere is placed around a cigar. When the cigar is smoked the ashes of this leaf are white. So are all substances decomposed by fire only. All black ashes are the further decomposition of a substance.—*Editor Problem of Nature*.

THE WAY INCANDESCENT LAMPS ARE MADE AND THE AIR EXHAUSTED.

"The way that incandescent lamps are made is very simple," an electrician said recently. "There are different ways of preparing the filaments, which are shaped, carbonized, and treated at a white heat. They are then placed in platinum holders, which are embedded in glass, and next go into the hands of the glass blower. The glass bulbs have round openings at the bottoms and little tubes at the tops. The little tubes all connect with a big tube. This is called a fork, and resembles a cluster of blackberries. Two or three dozen bulbs may be on a fork. The glass blower places filaments in each bulb, at the bottom, and welds the glass about the platinum holders to the edges of the opening. Then the air is drawn from the bulbs.

"The open end of the big tube is attached to an air pump, which has forty pounds of mercury at its top. As the mercury drops it carries all the air with it, and vacuums are created in the bulbs. The operator then takes a Bunsen burner, and directs its flame against the little tubes close to the bulb. This closes the bulbs, which are then removed from the big tube. The glass blower finishes them off. The exhausting of the air from so many lamps at once makes the cost small. The bulbs can be made by any ordinary glass blower, but it requires a man of intelligence to make the filaments."—*Electrical Review*.

Boiling Water.—Spencer F. Baird, of the Smithsonian Institution writes to the *Washington Star*: “I wish to call the attention of your readers to the beneficial effect of boiling in increasing the potability of water, a fact which does not appear to be generally appreciated or understood. Had this practice prevailed on the first outbreak of the typhoid disease at Plymouth, Pa., it is very probable that the number of cases of illness and of deaths might have been very greatly diminished. In cholera seasons this treatment is specially important, as water is largely the medium of introduction of the injurious influences into the system. During the Centennial Exhibition I was stationed in West Philadelphia, near the Centennial Buildings, for six months, and, although cases of diarrhoea were prevalent all around me, the use of boiled water appeared to be an absolute preventive. We had several cases of illness of this class before we began to use this very simple precaution, but none afterward. The fishy taste of the Potomac water at the present time, due to the solution in it of decomposed vegetation, or of fresh-water sponges, can also be in great measure removed by the same process. I have usually enough water boiled in the morning to last through the day. This is placed in a large water-cooler, without ice, and drawn from when required to fill ice-pitchers, etc. The water should boil actively for half an hour, in order to kill the germs of disease. Of course this is only effective in cases of organic impurities, as mineral poisons would not be destroyed thereby.”

The Small Red Ant.—Powdered borax sprinkled around the infested places will exterminate both red ants and black ants. Powdered cloves is said to drive them away. Another plan is to grease a plate with lard, and set it where these insects abound. They prefer lard to anything else, and will forsake sugar for it. Place a few sticks around the plate for the ants to climb up on. Occasionally turn the plate bottom up over the fire, and the ants will fall in with the melted lard.

An Optical Experiment.—If we cut out of black paper two similar figures—two crosses, for example—and place them, their extremities almost touching, at about three inches from the eyes, before a sheet of white paper, we shall see three crosses, the middle one being dark and completely separate. This phenomenon is explained by the simultaneous vision of the two eyes, and it is easy to show this by looking at the objects successively with one eye. The experiment becomes still more interesting when, instead of black figures, we employ complementary colors—red and green, for example. In this case we must use a dark back-ground, and there will appear a white cross in the middle.

Lemons Instead of Quinine for Malaria.—Cut up a lemon, peel and pulp in thin slices, and boil it in a pint and a half of water till it is reduced to half a pint. Strain through a linen cloth, squeezing the remains of the boiled lemon, and set it aside till cold. The entire liquid is taken fasting.

That man who has not the source of happiness within himself is miserable, though his surroundings be ever so favorable.

NAPHTHOL.

The extraordinary power of naphthol as an antiseptic and disinfecting agent has been known for a long time, but its disagreeable smell and the difficulty of preparing it in a purified state, with the occasional toxic action of the crude naphthol, have been a bar to its use as a remedial and antiseptic agent. Justus Wolff, a chemist interested in coal tar products, has recently succeeded in producing it in a pure and odorless state in well defined crystals, and claims its antiseptical action is much greater than that of carbolic acid. Recent research has demonstrated that the toxic effects of crude naphthol were due to the impurities it contained. Dr. Shoemaker, of Philadelphia, in a paper read before the Philadelphia County Medical Association, on the Medical Use and Value of Naphthol, conclusively proved the non-poisonous character of the purified or odorless naphthol by taking large doses internally. It has no corrosive action on the skin, and will not injure textile fabrics.

As a remedial agent it acts with greater efficiency, and has many advantages over carbolic acid; the fact of its being absolutely odorless will make it a desirable substitute. It is expected that it will shortly be produced on a manufacturing scale as a substitute for carbolic acid.—*Scientific American*.

WHAT IS MATTER?

The positive manner in which matter is spoken of in scientific discussion leads some to conclude it is well understood, and that it is easy to define what it is. In looking out upon the world of matter we see an infinite variety of forms, and to these we have given names, and have learned that each form has its own characteristics and is marked by peculiar behavior. Matter is attended by phenomena of motion and affinity, which two distinguishing points constitute the whole field of study open to man. There are more than sixty bodies which are distinguishable by their peculiar physical appearance and by their behavior and reactions. These bodies we call elements; and when they group themselves together they are called molecules; and when these combine in mass, a body results, which may be solid, liquid, or gaseous, and to which is given a name which distinguishes it from all other bodies. After a careful study of a body, we are still in the dark regarding what it is. Very many of the most active and wonderful forms which have been studied, and which are supposed to be well understood, have never been seen by the eye of the investigator. These forms of matter are exceedingly wonderful and interesting.—*Whence? What? Where?*

Eating Lemons.—It will not do for all to eat anything so sour as lemons, at least under ordinary circumstances. But with most people, they are a healthy fruit. It is seldom, however, they should be eaten undiluted, and, often, even when diluted, the addition of much sugar is deleterious. Sometimes the juice of a lemon in a glass of cold water is much better for the system than the water alone, and especially is the healthfulness of the lemon in this form seen if taken just before retiring, and on rising in the morning.